API Well Number: 43047516190000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3
AMENDED REPORT ☐

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER NBU 922-36D4CS	
2. TYPE OF WORK DRILL NEW WELL ◉ REENTER P&A WELL ○ DEEPEN WELL ○	**3. FIELD OR WILDCAT** NATURAL BUTTES
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO	**5. UNIT or COMMUNITIZATION AGREEMENT NAME** NATURAL BUTTES
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.	**7. OPERATOR PHONE** 720 929-6515
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217	**9. OPERATOR E-MAIL** julie.jacobson@anadarko.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML-22650	**11. MINERAL OWNERSHIP** FEDERAL ○ INDIAN ○ STATE ◉ FEE ○
	12. SURFACE OWNERSHIP FEDERAL ○ INDIAN ○ STATE ◉ FEE ○
13. NAME OF SURFACE OWNER (if box 12 = 'fee')	**14. SURFACE OWNER PHONE (if box 12 = 'fee')**
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')	**16. SURFACE OWNER E-MAIL (if box 12 = 'fee')**
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')	**18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS** YES ◉ (Submit Commingling Application) NO ○
	19. SLANT VERTICAL ○ DIRECTIONAL ◉ HORIZONTAL ○

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1064 FNL 990 FWL	NWNW	36	9.0 S	22.0 E	S
Top of Uppermost Producing Zone	1241 FNL 825 FWL	NWNW	36	9.0 S	22.0 E	S
At Total Depth	1241 FNL 825 FWL	NWNW	36	9.0 S	22.0 E	S

21. COUNTY UINTAH	**22. DISTANCE TO NEAREST LEASE LINE (Feet)** 825	**23. NUMBER OF ACRES IN DRILLING UNIT** 640
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 174	**26. PROPOSED DEPTH** MD: 8916 TVD: 8904
27. ELEVATION - GROUND LEVEL 5087	**28. BOND NUMBER** 22013542	**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE** Permit #43-8496

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	11	8.625	0 - 2450	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 8916	11.6	I-80 LT&C	12.5	Premium Lite High Strength	290	3.38	11.0
							50/50 Poz	1180	1.31	14.3

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ☑ TOPOGRAPHICAL MAP

NAME Gina Becker	**TITLE** Regulatory Analyst II	**PHONE** 720 929-6086
SIGNATURE	**DATE** 05/13/2011	**EMAIL** gina.becker@anadarko.com

API NUMBER ASSIGNED
43047516190000

APPROVAL

Permit Manager

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 922-36D4CS

Surface:	1064 FNL / 990 FWL	NWNW
BHL:	1241 FNL / 825 FWL	NWNW

Section 36 T9S R22E

Unitah County, Utah
Mineral Lease: ML-22650

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1330	
Birds Nest	1630	Water
Mahogany	1995	Water
Wasatch	4435	Gas
Mesaverde	6651	Gas
MVU2	7662	Gas
MVL1	8260	Gas
TVD	8904	
TD	8916	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8904' TVD, approximately equals 5,877 psi 0.64 psi/ft = actual bottomhole gradient

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,727 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- *Blowout Prevention Equipment (BOPE) requirements;*
- *Mud program requirements; and*
- *Special drilling operation (surface equipment placement) requirements associated with air drilling.*

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements
The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements
Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements
Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Drilling Program.

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	May 6, 2011
WELL NAME	**NBU 922-36D4CS**			TD	8,904' TVD 8,916' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	5087.1
SURFACE LOCATION	NWNW 1064 FNL 990 FWL	Sec 36	T 9S	R 22E			
	Latitude: 39.996896	Longitude: -109.393515			NAD 27		
BTM HOLE LOCATION	NWNW 1241 FNL 825 FWL	Sec 36	T 9S	R 22E			
	Latitude: 39.996413	Longitude: -109.394105			NAD 27		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.						

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			12-1/4	8-5/8", 28#, IJ-55, LTC	Air mist
		200'			
			11'	8-5/8", 28#, IJ-55, LTC	Air mist

All water flows encountered while drilling will be reported to the appropriate agencies.

Green River @	1,330'
Top of Birds Nest @	1,630'
Mahogany @	1,995'
Preset f/ GL @	2,450' MD

Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

Wasatch @	4,435'
Mverde @	6,651' TVD
MVU2 @	7,662' TVD
MVU1 @	8,260' TVD
TD @	8,904' TVD / 8,916' MD

Mud logging program TBD

Cased hole logging program from TD - surf csg

Max anticipated Mud required 12.5 ppg

7-7/8"	4-1/2" 11.6# I-80 or equivalent BTC/LTC csg	Water / Fresh Water Mud 8.3-12.0 ppg

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	LTC	BTC TENSION
CONDUCTOR	14"	0-40'							
						3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,450	28.00	IJ-55	LTC	2.21	1.64	5.79	N/A
						7,780	6,350	279,000	367,000
PRODUCTION	4-1/2"	0 to 8,916	11.60	I-80	LTC/BTC	1.11	1.10	3.33	4.39

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	1,950'	65/35 Poz + 6% Gel + 10 pps gilsonite	180	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,926'	Premium Lite II +0.25 pps	290	20%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	4,990'	50/50 Poz/G + 10% salt + 2% gel	1,180	35%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

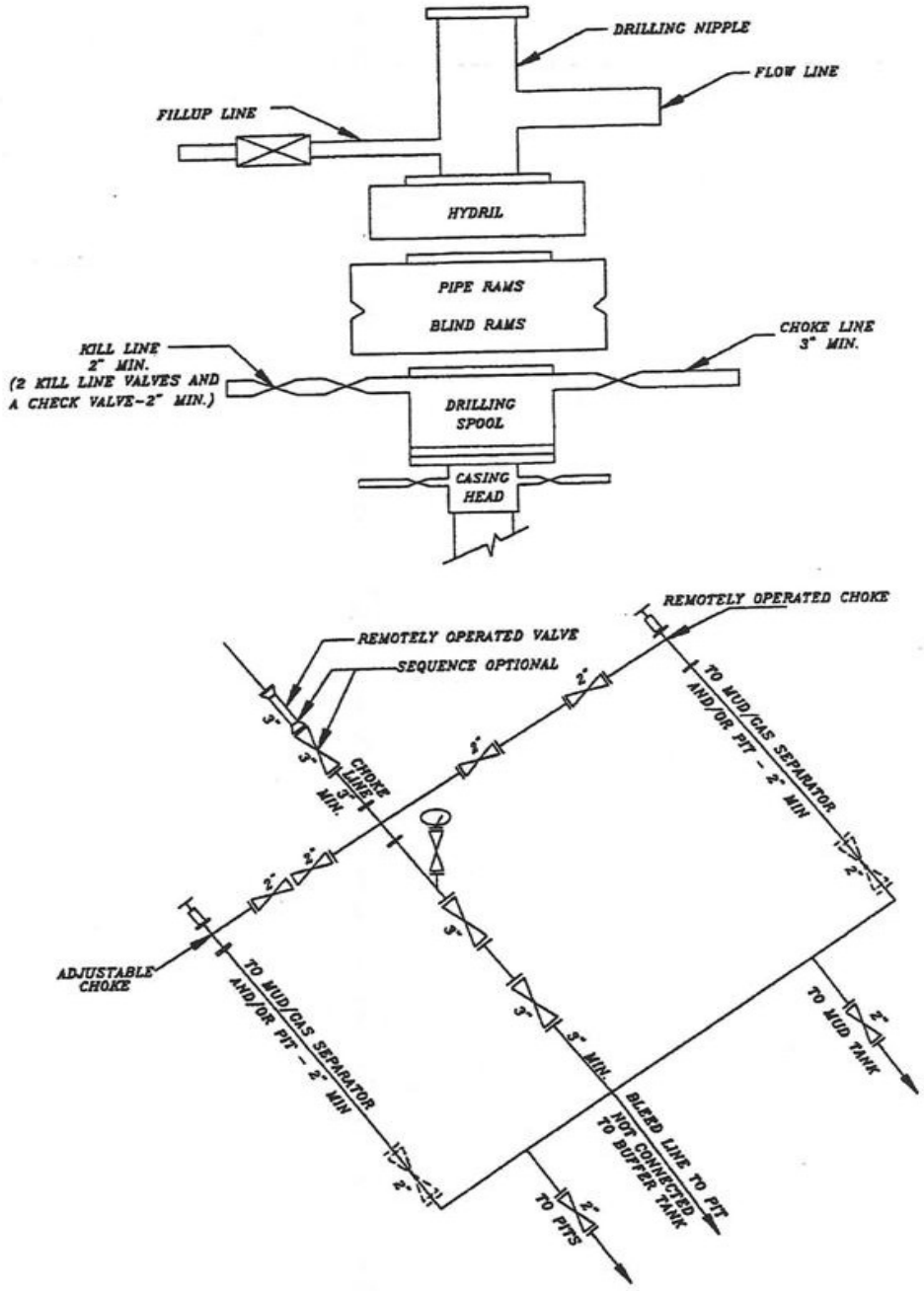
DRILLING ENGINEER: _____ **DATE:** _____

Nick Spence / Emile Goodwin

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

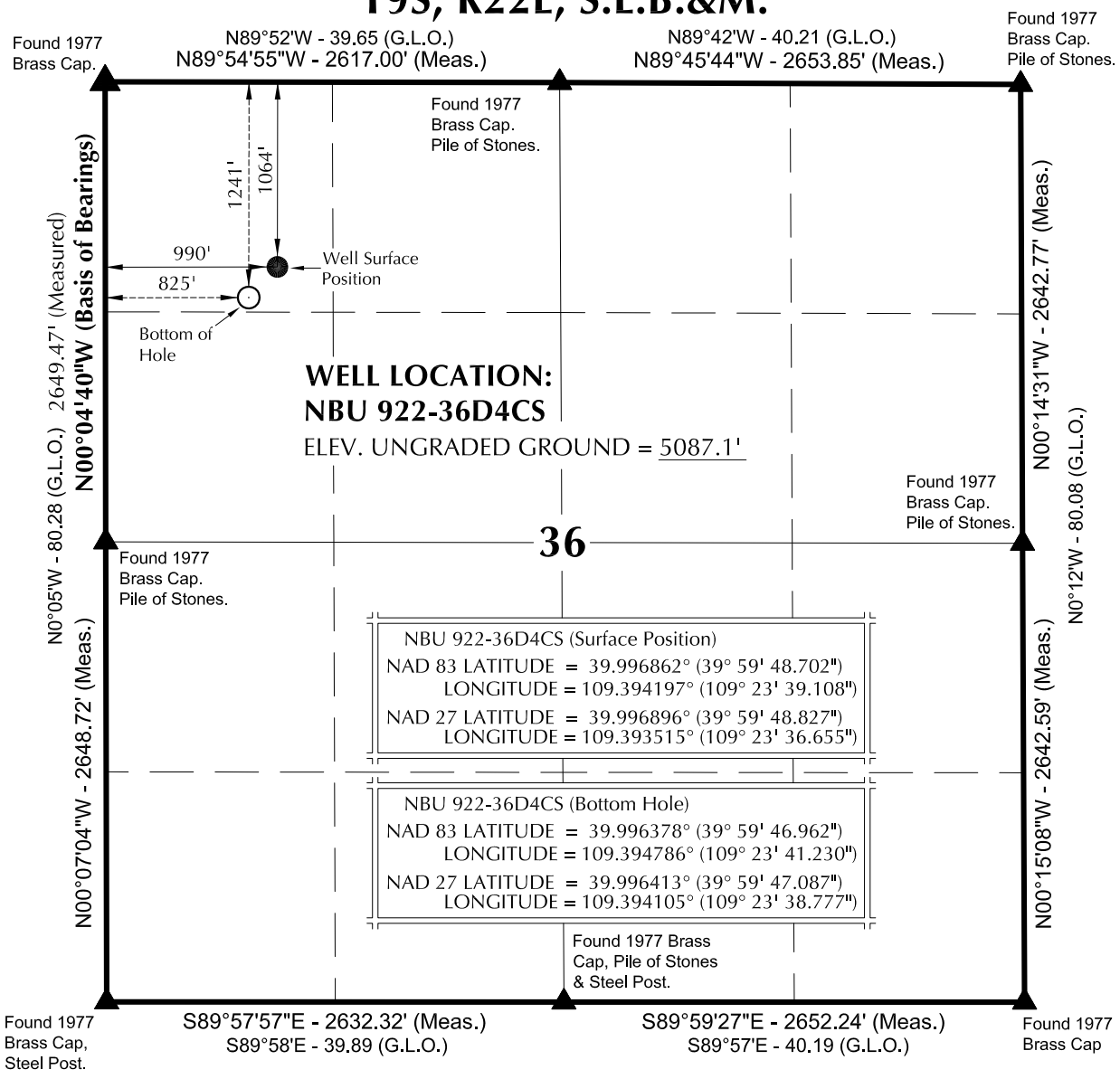
EXHIBIT A
NBU 922-36D4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

API Well Number: 43047516190000

T9S, R22E, S.L.B.&M.



NOTES:

▲ = Section Corners Located

1. Well footages are measured at right angles to the Section Lines.
2. G.L.O. distances are shown in feet or chains. 1 chain = 66 feet.
3. The Bottom of hole bears S43°07'25"W 241.49' from the Surface Position.
4. Bearings are based on Global Positioning Satellite observations.
5. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.

N

1000' 500' 0' 1000'

SCALE

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR No.6028691 JOHN R SLAUGH STATE OF UTAH

PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD: NBU 922-36D

NBU 922-36D4CS
WELL PLAT
1241' FNL, 825' FWL (Bottom Hole)
NW ¼ NW ¼ OF SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

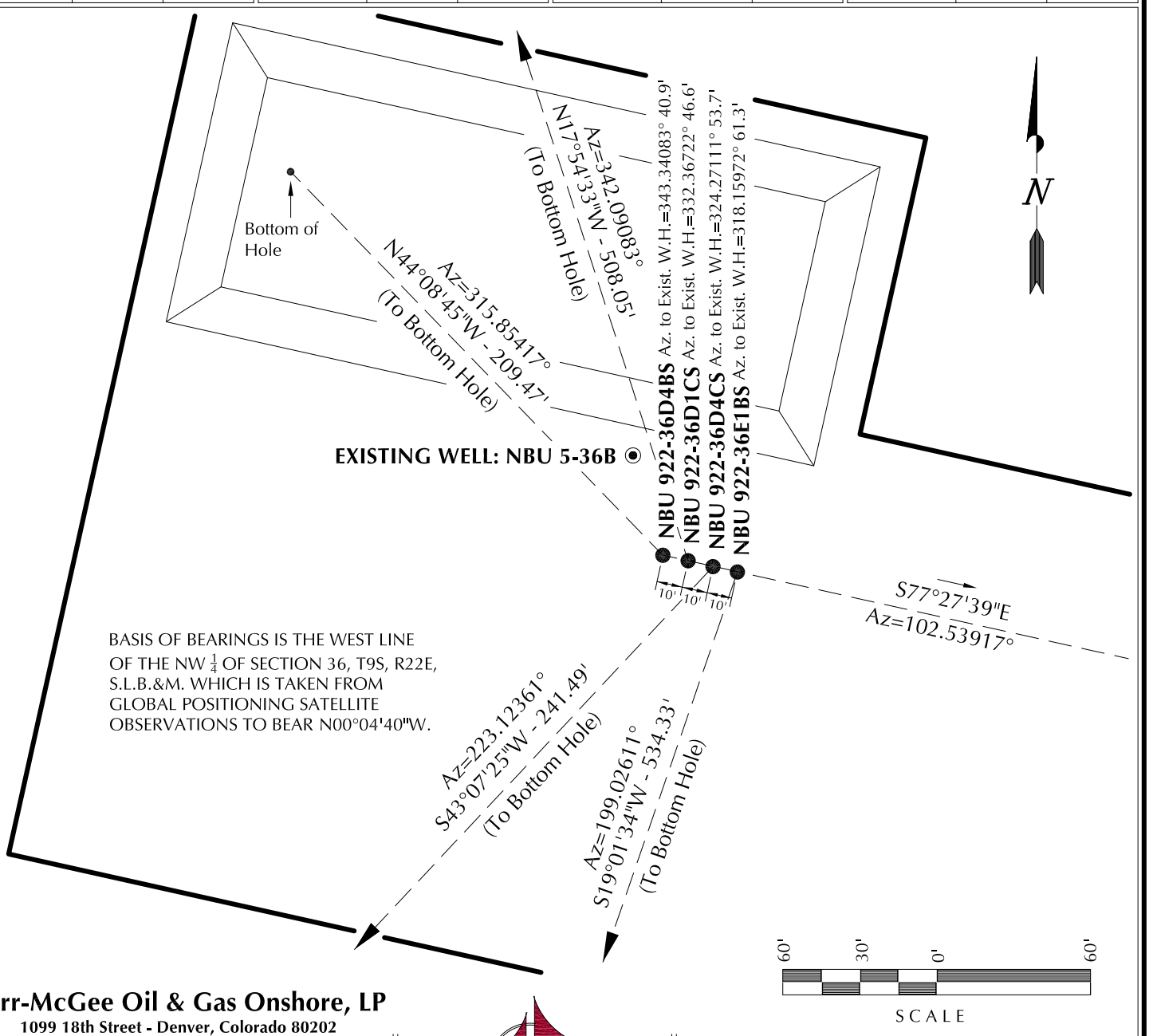
DATE SURVEYED: 9-1-10	SURVEYED BY: M.S.B.	SHEET NO: 3
DATE DRAWN: 11-15-10	DRAWN BY: M.W.W.	3 OF 16
SCALE: 1" = 1000'	Date Last Revised:	

API Well Number: 43047516190000

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27			NAD83		NAD27		
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES
NBU 922-36D4BS	39°59'48.746" 39.996874°	109°23'39.360" 109.394267°	39°59'48.871" 39.996909°	109°23'36.907" 109.393585°	1060' FNL 971' FWL	39°59'50.233" 39.997287°	109°23'41.232" 109.394787°	39°59'50.357" 39.997321°	109°23'38.779" 109.394105°	910' FNL 825' FWL
NBU 922-36D1CS	39°59'48.725" 39.996868°	109°23'39.233" 109.394231°	39°59'48.850" 39.996903°	109°23'36.780" 109.393550°	1062' FNL 981' FWL	39°59'53.503" 39.998195°	109°23'41.235" 109.394787°	39°59'53.627" 39.998230°	109°23'38.782" 109.394106°	579' FNL 825' FWL
NBU 922-36D4CS	39°59'48.702" 39.996862°	109°23'39.108" 109.394197°	39°59'48.827" 39.996896°	109°23'36.655" 109.393515°	1064' FNL 990' FWL	39°59'46.962" 39.996378°	109°23'41.230" 109.394786°	39°59'47.087" 39.996413°	109°23'38.777" 109.394105°	1241' FNL 825' FWL
NBU 922-36E1BS	39°59'48.681" 39.996856°	109°23'38.985" 109.394162°	39°59'48.806" 39.996890°	109°23'36.532" 109.393481°	1067' FNL 1000' FWL	39°59'43.692" 39.995470°	109°23'41.227" 109.394785°	39°59'43.816" 39.995505°	109°23'38.775" 109.394104°	1572' FNL 825' FWL
NBU 5-36B	39°59'49.133" 39.996981°	109°23'39.510" 109.394308°	39°59'49.257" 39.997016°	109°23'37.057" 109.393627°	1021' FNL 959' FWL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
NBU 922-36D4BS	150.3'	-145.9'	NBU 922-36D1CS	483.4'	-156.2'	NBU 922-36D4CS	-176.3'	-165.1'	NBU 922-36E1BS	-505.1'	-174.2'



BASIS OF BEARINGS IS THE WEST LINE OF THE NW $\frac{1}{4}$ OF SECTION 36, T9S, R22E, S.L.B.&M. WHICH IS TAKEN FROM GLOBAL POSITIONING SATELLITE OBSERVATIONS TO BEAR N00°04'40"W.

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-36D

WELL PAD INTERFERENCE PLAT

WELLS - NBU 922-36D4BS, NBU 922-36D1CS, NBU 922-36D4CS & NBU 922-36E1BS LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 9-1-10	SURVEYED BY: M.S.B.	SHEET NO: 5
DATE DRAWN: 11-15-10	DRAWN BY: M.W.W.	5 OF 16
SCALE: 1" = 60'	Date Last Revised:	

API Well Number: 43047516190000

16" GAS LINE
6" (MAX.) LIQUID LINE

16" GAS LINE
6" (MAX.) LIQUID LINE

5090

TOPSOIL STOCKPILE

EXISTING ACCESS ROAD

PROPOSED ACCESS ROAD RE-ROUTE

RESERVE PIT & EXCESS CUT STOCKPILE

6" GAS LINE
6" (MAX.) LIQUID LINE

170'

182'

15'

120'

47'

RECLAIMED PIT

235'

225'

260'

ANCHOR

EXISTING METER

EXISTING METHANOL TANK

EXISTING TANK AND BERM

BOILER

GENERATOR

DIESEL TANK

MUD PUMP 1

MUD PUMP 2

MUD TANK

SHAKER TANK

EXISTING WELL: NBU 5-36B (SHUT-IN)

N44°08'45"W - 209.47'
(TO BOTTOM HOLE)

RESERVE PIT
12' DEPTH
SLOPE 1.5:1

N17°54'33"W - 508.05'
(TO BOTTOM HOLE)

S43°07'25"W - 241.49'
(TO BOTTOM HOLE)

CUT FILL

NBU 922-36D4BS
NBU 922-36D1CS
NBU 922-36D4CS
NBU 922-36E1BS

10'
10'
10'

S19°01'34"W - 534.33'
(TO BOTTOM HOLE)

EXISTING SEPARATOR

WATER TANK

PIPERACKS

PIPETUBS

DERRICK STAND

55'

15'

119'

MOVE EXISTING SPOILS PILE TO PROPOSED LOCATION

220'

200'

165'

EXISTING WELL PAD

RESERVE PIT & EXCESS CUT STOCKPILE

170'

63'

A

A'

B

B'

1 C6.9
2 C8.6
3 C5.7
4 C2.1
5 F2.3
6 F1.6
7 C0.5
8 C4.5
9 C5.2
10 C8.2
A C5.9
B C3.4
C F1.9
D C0.4
W C0.4

PROPOSED ACCESS ROAD RE-ROUTE

EXISTING ACCESS ROAD

EXISTING OVERHEAD POWER LINE

5090

PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - NBU 922-36D DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5087.1'
FINISHED GRADE ELEVATION = 5086.7'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.50 ACRES
TOTAL DAMAGE AREA = 6.28 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-36D

WELL PAD - LOCATION LAYOUT
NBU 922-36D4BS, NBU 922-36D1CS,
NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 16,085 C.Y.
TOTAL FILL FOR WELL PAD = 1,029 C.Y.
TOPSOIL @ 6" DEPTH = 2,225 C.Y.
EXCESS MATERIAL = 15,056 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
+/- 11,020 C.Y.
RESERVE PIT CAPACITY (2' OF FREEBOARD)
+/- 42,290 BARBELS

WELL PAD LEGEND

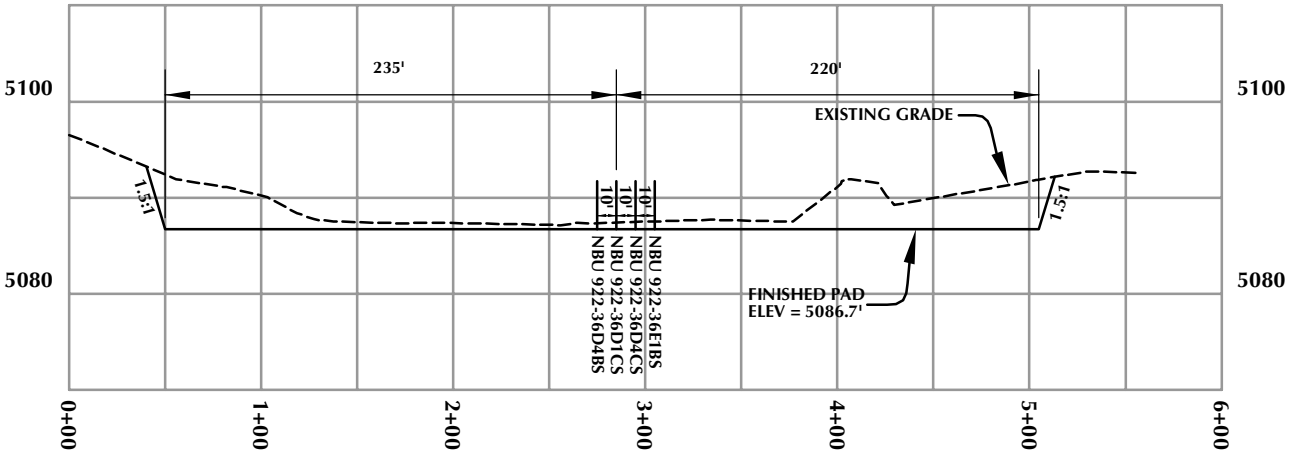
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL — PROPOSED PIPELINE
- EPL — EXISTING PIPELINE

HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

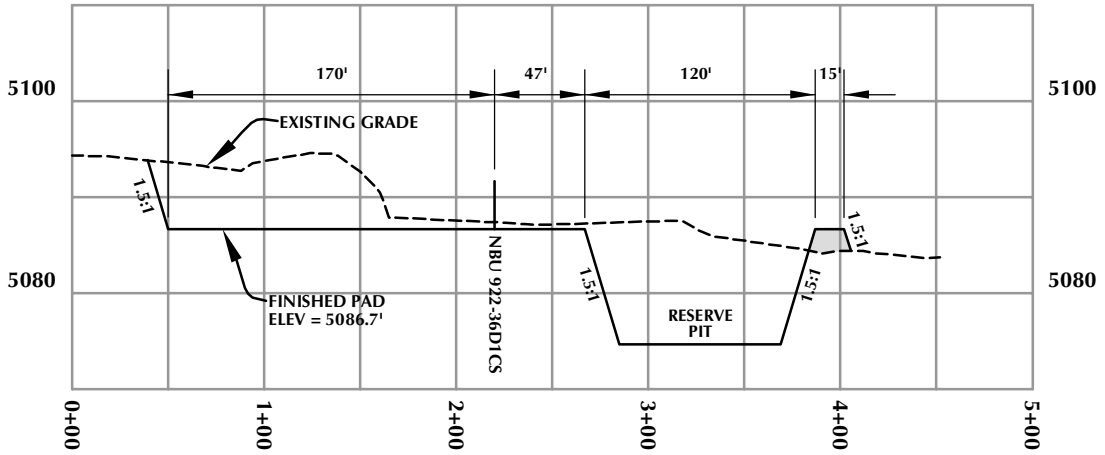
TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

SCALE: 1"=60' | DATE: 12/3/10 | SHEET NO: 6 6 OF 16
REVISED:

C:\ANADARKO\2010_48_NBU_FOCUS_SEC_36-922\DWGS\NBU 922-36D\NBU_922-36D_PAD_20101103.dwg, 12/8/2010 12:17:37 PM, jake



CROSS SECTION A-A'



CROSS SECTION B-B'

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-36D

WELL PAD - CROSS SECTIONS
NBU 922-36D4BS, NBU 922-36D1CS,
NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

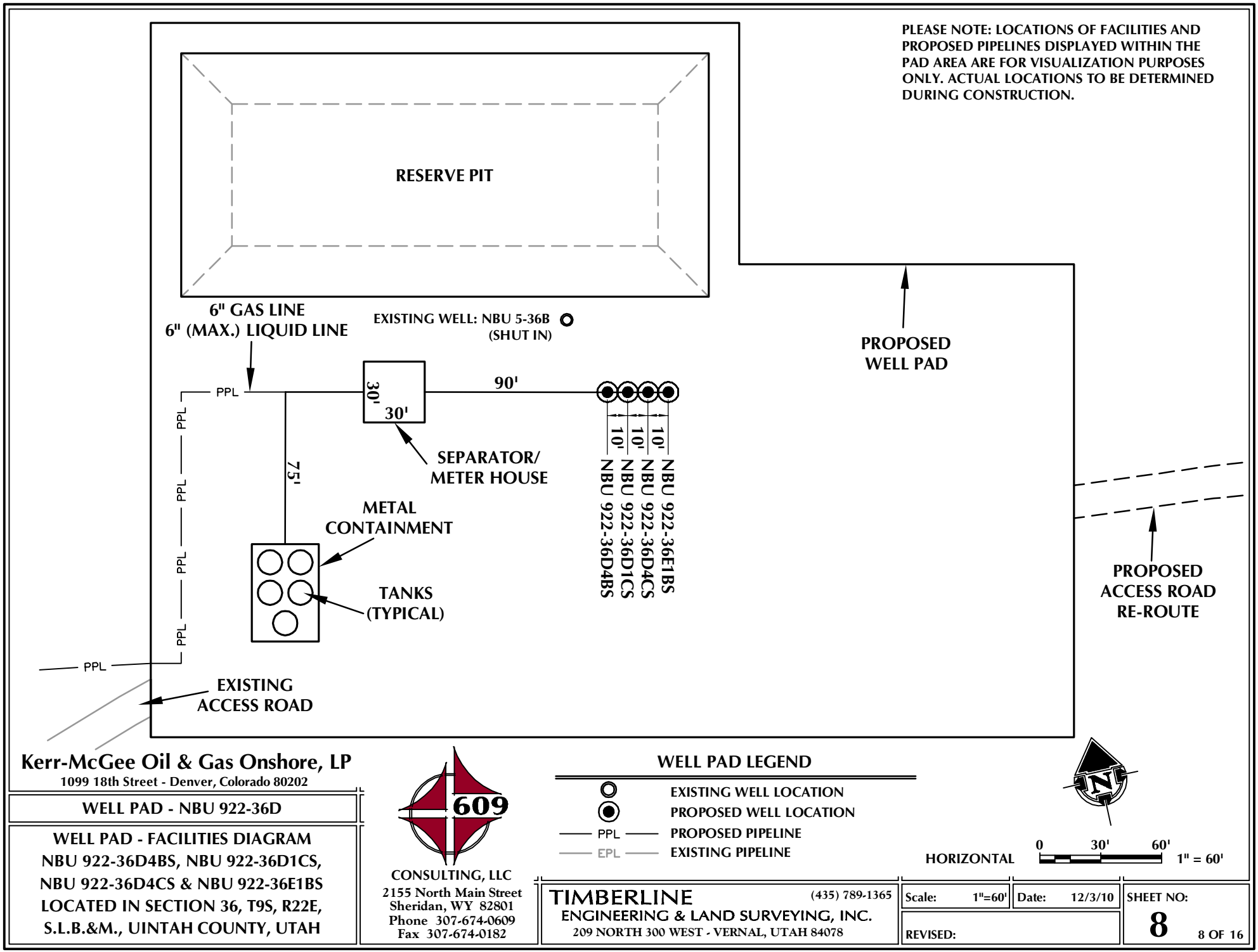
609
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182

HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=100' | Date: 12/3/10 | SHEET NO: 7 7 OF 16
REVISED:

K:\ANADARKO\2010_48_NBU_FOCUS_SEC_36-922\DWGS\NBU 922-36D\NBU_922-36D_PAD_20101103.dwg, 11/29/2010 4:01:40 PM, jake


PLEASE NOTE: LOCATIONS OF FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.
RESERVE PIT
6" GAS LINE
6" (MAX.) LIQUID LINE
EXISTING WELL: NBU 5-36B
(SHUT IN)
PROPOSED
WELL PAD
PPL
30'
30'
90'
10'
10'
10'
SEPARATOR/
METER HOUSE
75'
NBU 922-36D4BS
NBU 922-36D1CS
NBU 922-36D4CS
NBU 922-36E1BS
METAL
CONTAINMENT
TANKS
(TYPICAL)
PROPOSED
ACCESS ROAD
RE-ROUTE
EXISTING
ACCESS ROAD
Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202
WELL PAD - NBU 922-36D
WELL PAD - FACILITIES DIAGRAM
NBU 922-36D4BS, NBU 922-36D1CS,
NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH
609
CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
Fax 307-674-0182
WELL PAD LEGEND
EXISTING WELL LOCATION
PROPOSED WELL LOCATION
PROPOSED PIPELINE
EXISTING PIPELINE
N
HORIZONTAL
0
30'
60'
1" = 60'
TIMBERLINE
(435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078
Scale: 1"=60'
Date: 12/3/10
REVISED:
SHEET NO:
8
8 OF 16
K:\ANADARKO\2010_48_NBU_FOCUS_SEC_36-922\DWGS\NBU_922-36D_PAD_20101103.dwg, 12/8/2010 12:20:23 PM, jake

API Well Number: 43047516190000

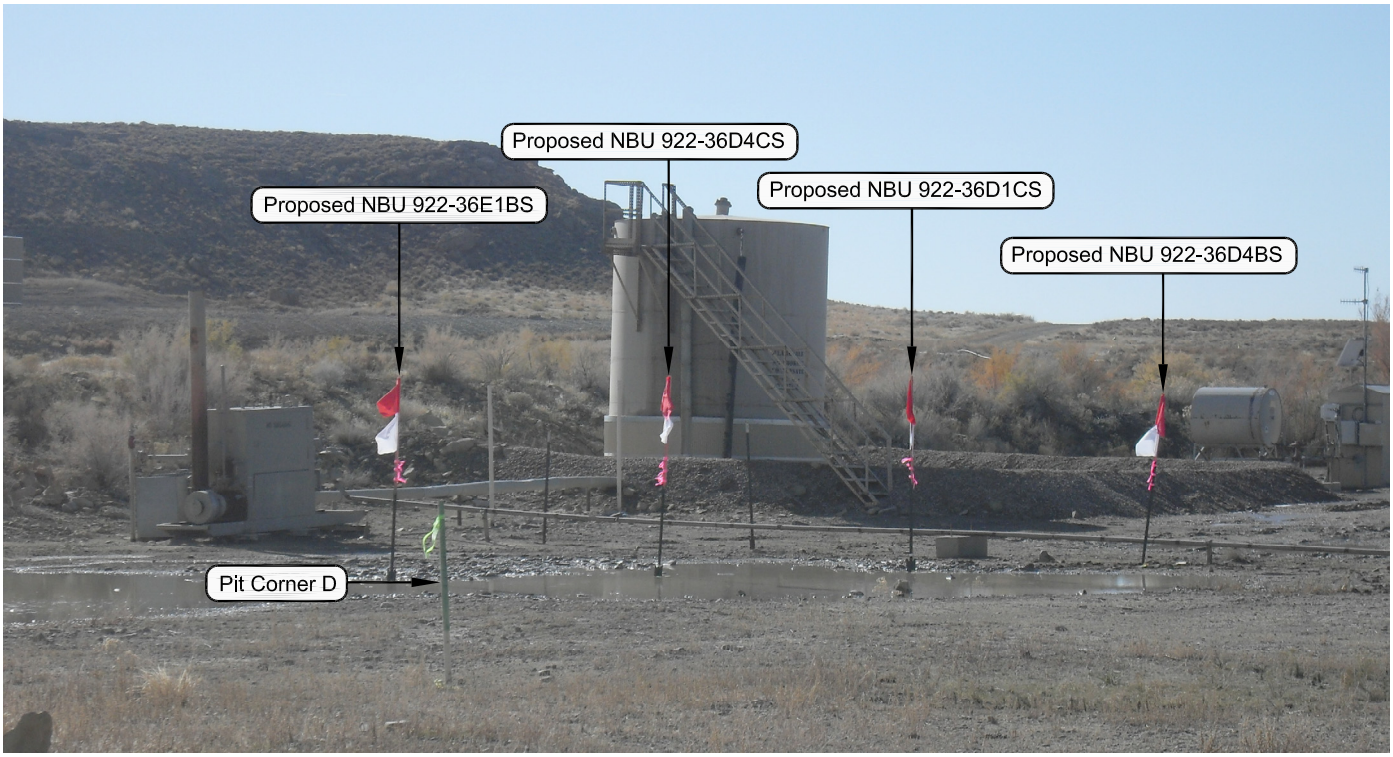


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE **CAMERA ANGLE: SOUTHWESTERLY**

PHOTO VIEW: FROM EXISTING ACCESS ROAD **CAMERA ANGLE: NORTHEASTERLY**

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - NBU 922-36D

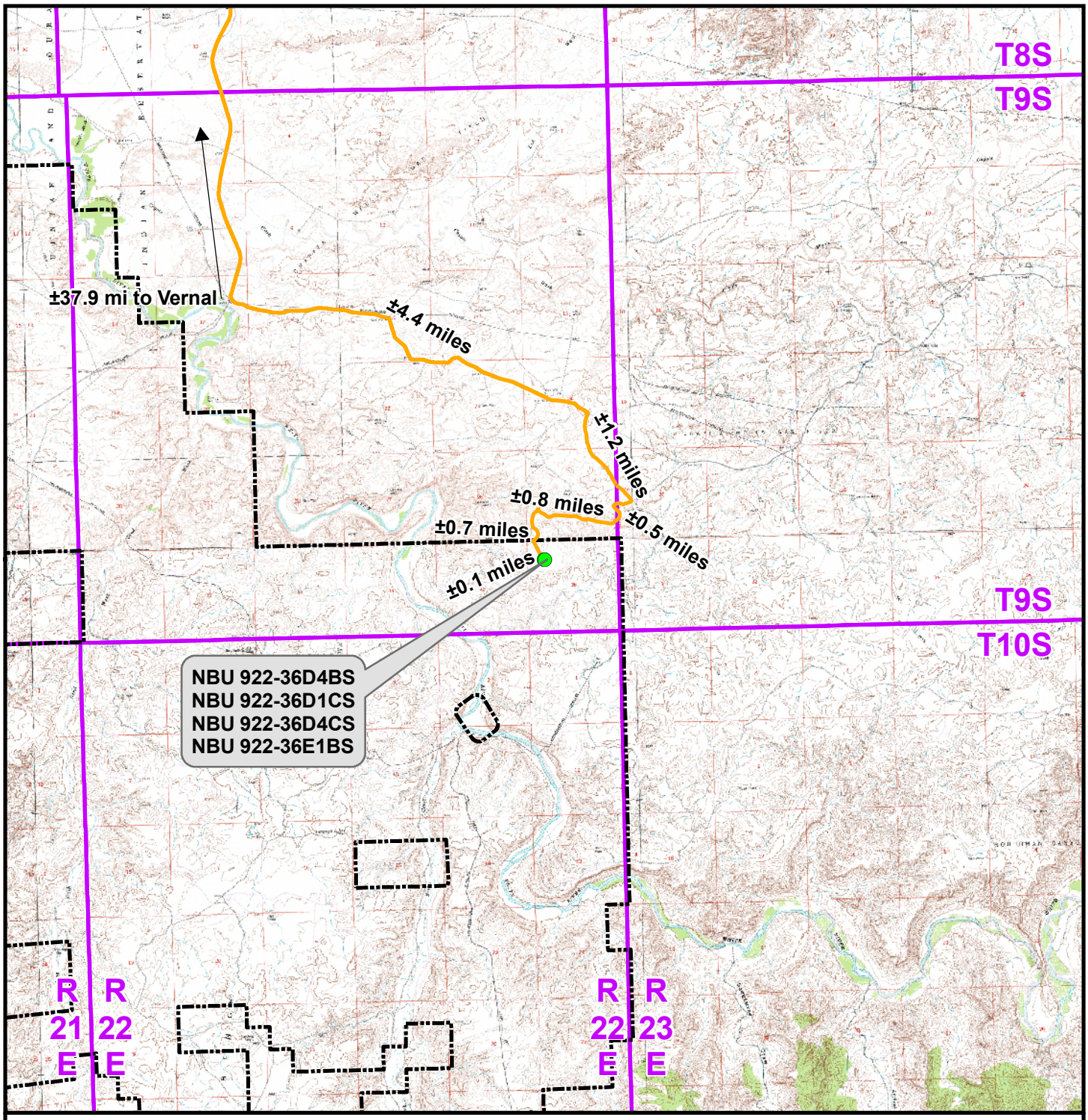
LOCATION PHOTOS
NBU 922-36D4BS, NBU 922-36D1CS, NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH.

609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 9-1-10	PHOTOS TAKEN BY: M.S.B.	SHEET NO: 9
DATE DRAWN: 11-15-10	DRAWN BY: M.W.W.	9 OF 16
Date Last Revised:		

API Well Number: 43047516190000



Legend

Distance From Well Pad - NBU 922-36D To Unit Boundary: ±1,060ft

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 922-36D

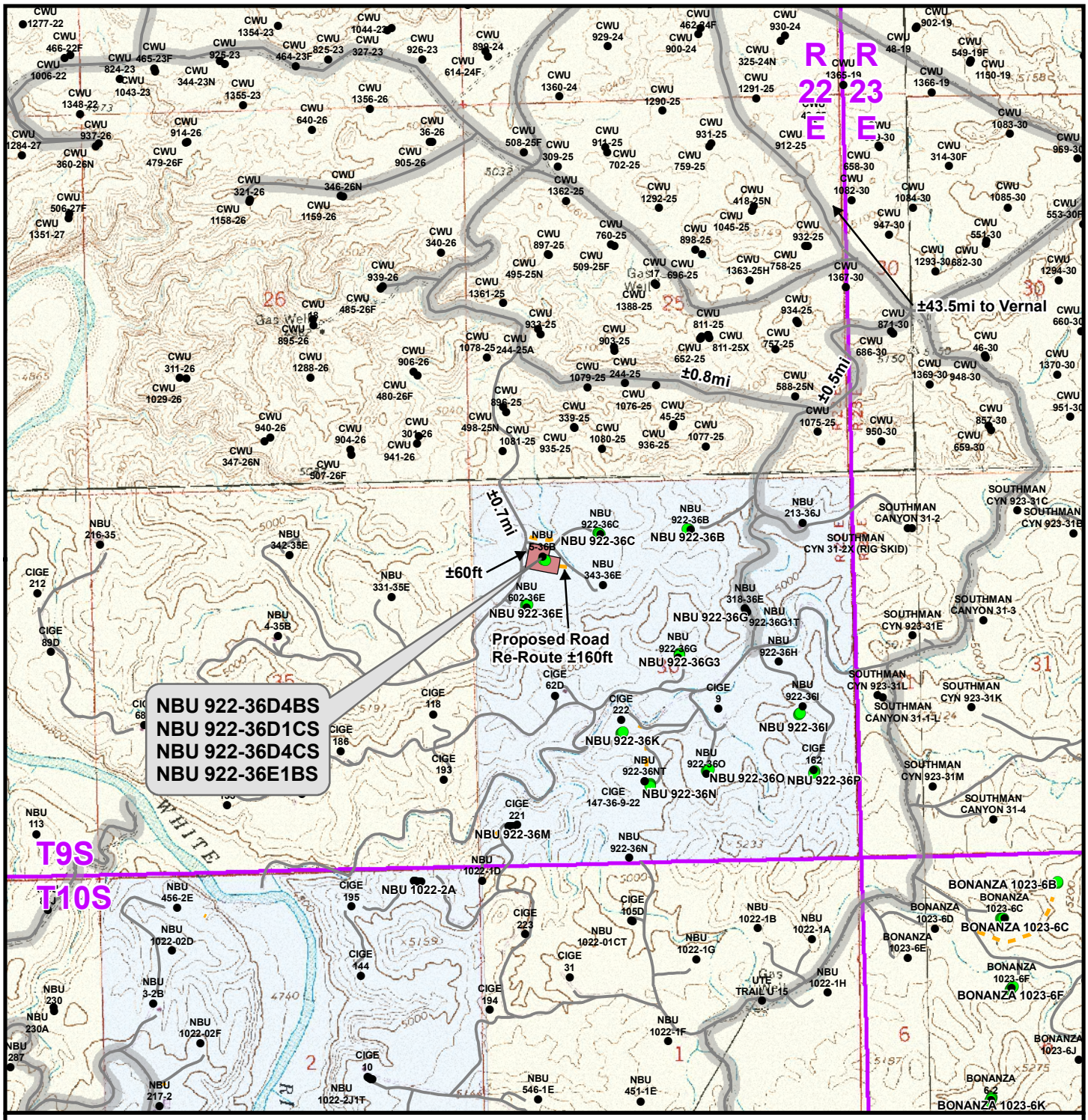
TOPO A
NBU 922-36D4BS, NBU 922-36D1CS, NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1:100,000	NAD83 USP Central	Sheet No: 10	10 of 16
Drawn: TL	Date: 3 Dec 2010		
Revised:	Date:		

API Well Number: 43047516190000



Legend

Total Proposed Road Re-Route Length: ±160ft

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Bureau of Land Management
- Indian Reservation
- State
- Private

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 922-36D

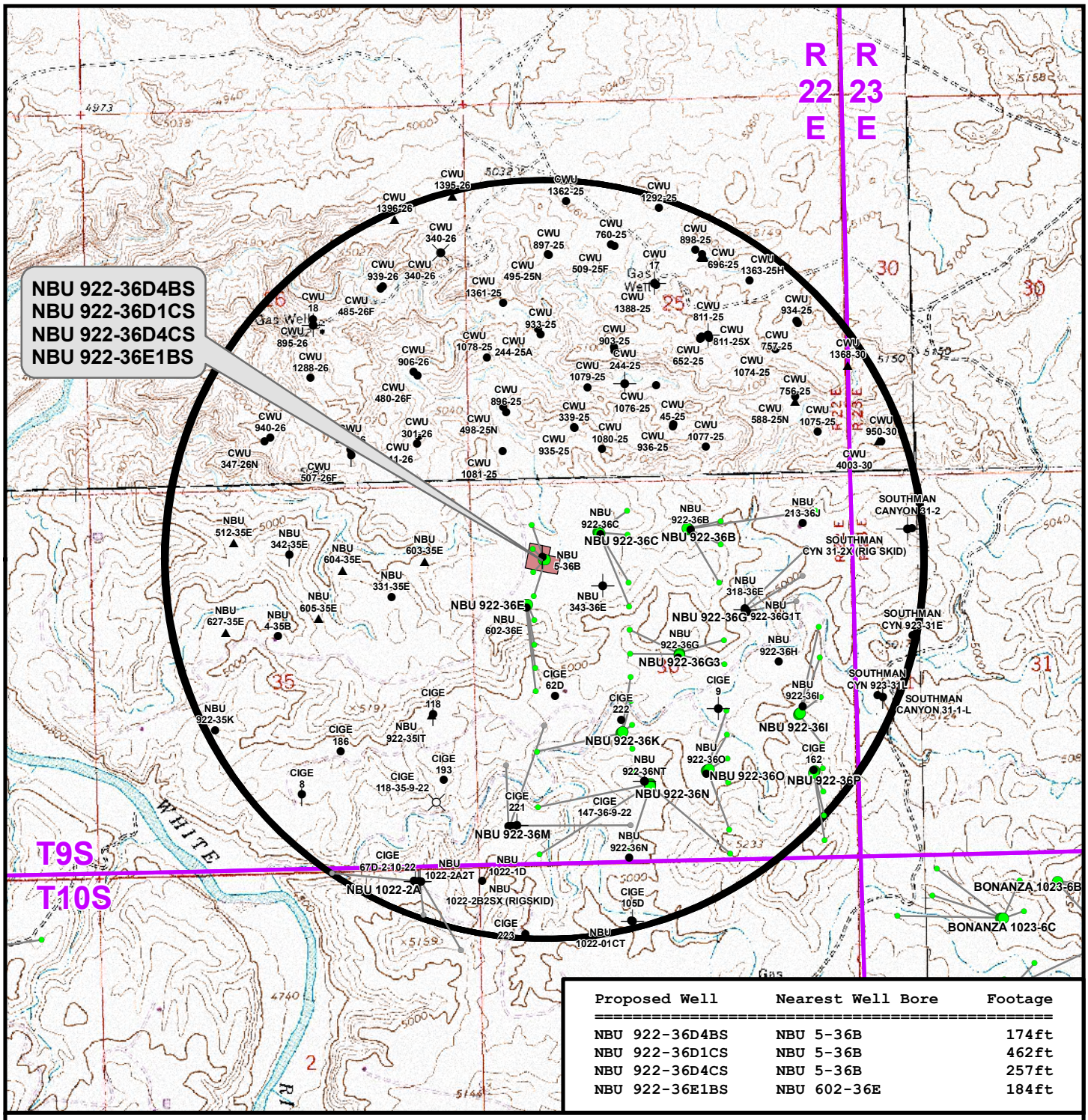
TOPO B
NBU 922-36D4BS, NBU 922-36D1CS,
NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 11	11 of 16
Drawn: TL	Date: 3 Dec 2010		
Revised:	Date:		

API Well Number: 43047516190000



Proposed Well	Nearest Well Bore	Footage
NBU 922-36D4BS	NBU 5-36B	174ft
NBU 922-36D1CS	NBU 5-36B	462ft
NBU 922-36D4CS	NBU 5-36B	257ft
NBU 922-36E1BS	NBU 602-36E	184ft

Well locations derived from State of Utah, Dept. of Natural Resources, Division of Oil, Gas and Mining

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Well Pad
- Well Path
- Bottom Hole - Existing
- Well - 1 Mile Radius

- Producing
- Active
- Spudded (Drilling commenced: Not yet completed)
- Approved permit (APD); not yet spudded
- New Permit (Not yet approved or drilled)
- Inactive
- Drilling Operations Suspended
- Temporarily-Abandoned
- Shut-In
- Plugged and Abandoned
- Location Abandoned
- Dry hole marker, buried
- Returned APD (Unapproved)

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 922-36D

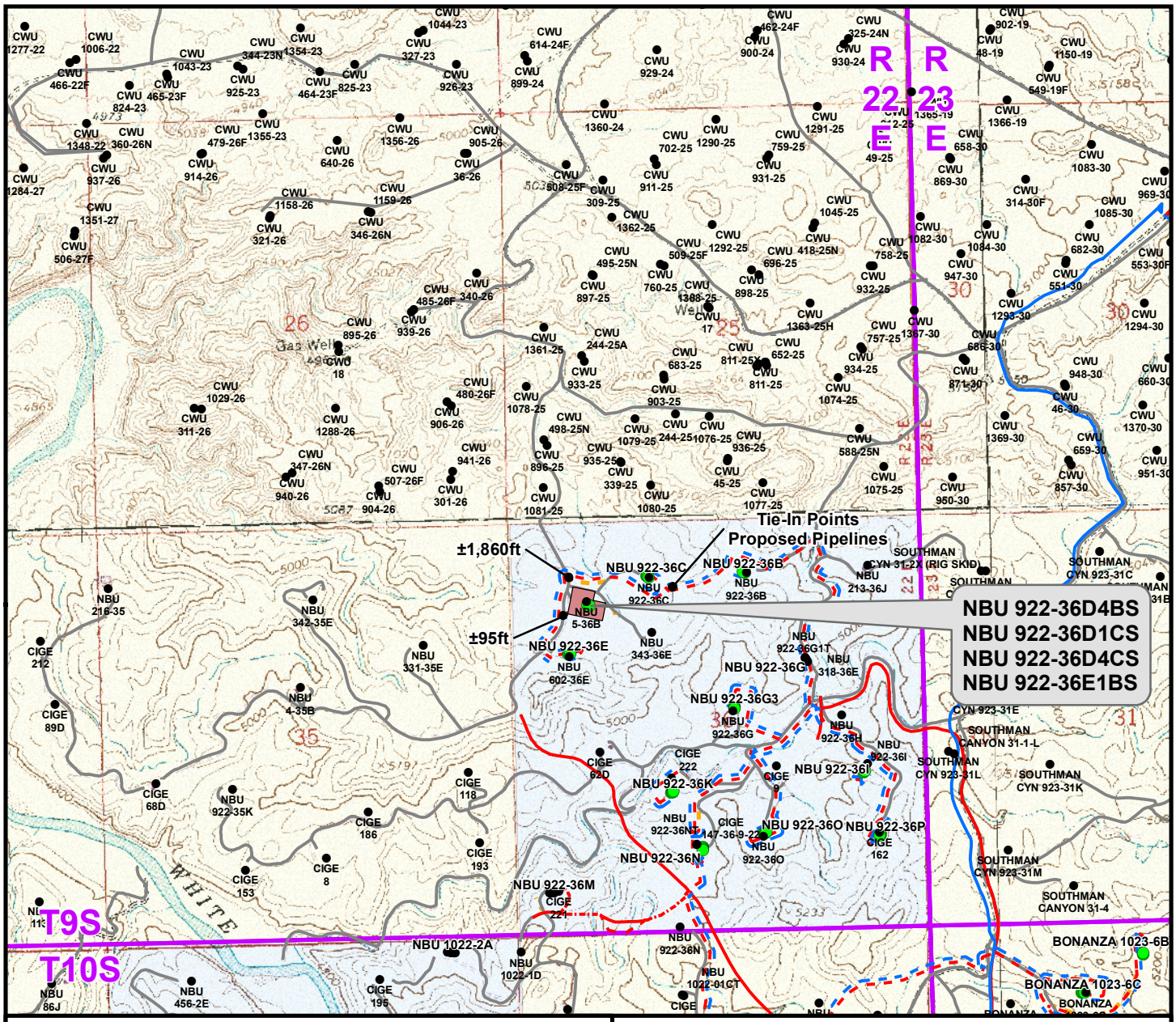
TOPO C
NBU 922-36D4BS, NBU 922-36D1CS, NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 12 of 16
Drawn: TL	Date: 3 Dec 2010	
Revised:	Date:	

API Well Number: 43047516190000



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±255ft
Proposed 6" (Max.) (Edge of Pad to 36E Intersection)	±95ft
Proposed 6" (Max.) (36E Intersection to 36C Intersection)	±1,860ft
TOTAL PROPOSED LIQUID PIPELINE =	±2,210ft

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±255ft
Proposed 6" (Edge of Pad to 36E Intersection)	±95ft
Proposed 16" (36E Intersection to 36C Intersection)	±1,860ft
TOTAL PROPOSED GAS PIPELINE =	±2,210ft

Legend

- Well - Proposed
- Well - Existing
- Well Pad
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

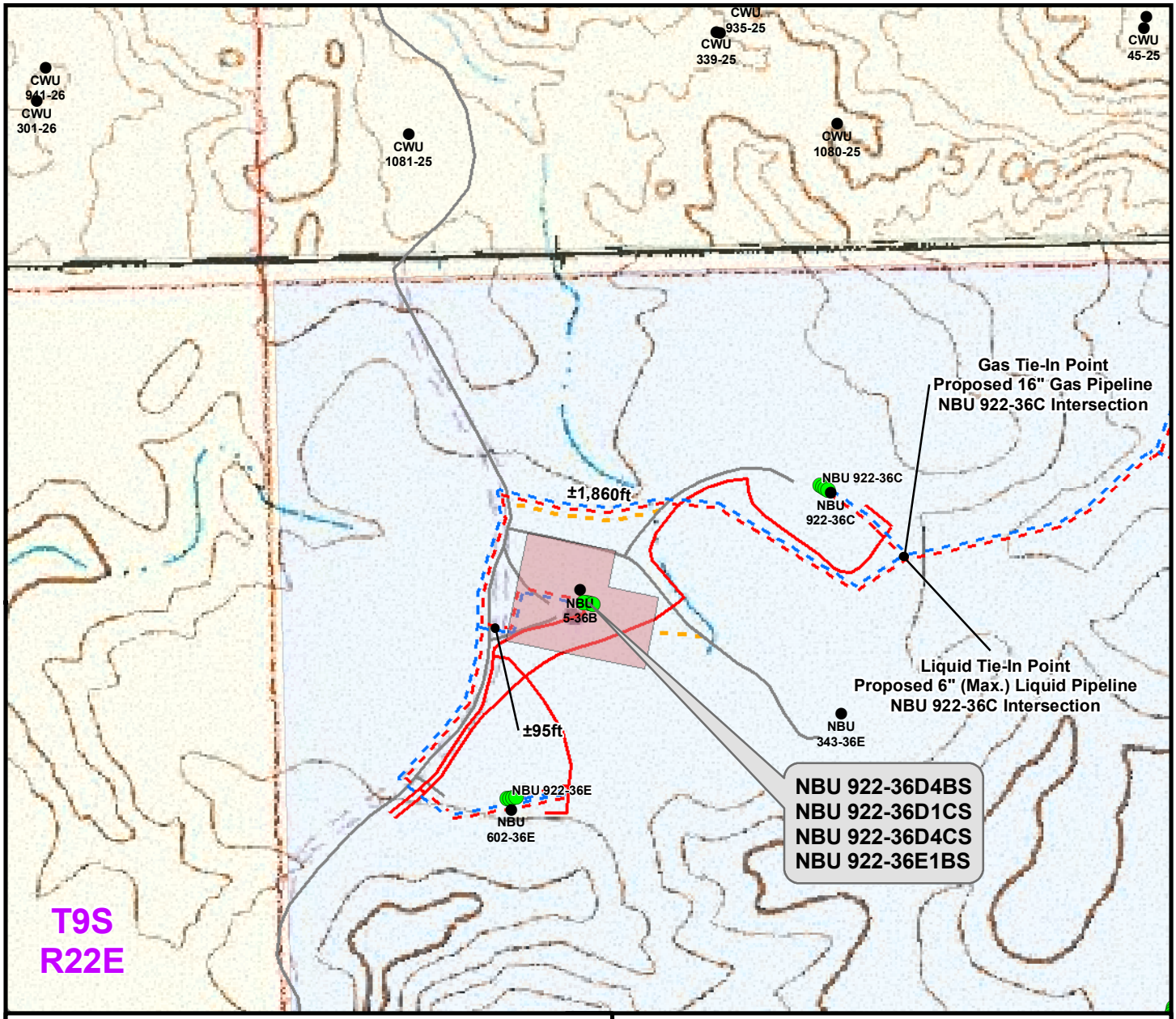
WELL PAD - NBU 922-36D

TOPO D
NBU 922-36D4BS, NBU 922-36D1CS, NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 13 of 16
Drawn: TL	Date: 3 Dec 2010	
Revised:	Date:	



Proposed Liquid Pipeline	Length
Proposed 6" (Max.) (Meter House to Edge of Pad)	±255ft
Proposed 6" (Max.) (Edge of Pad to 36E Intersection)	±95ft
Proposed 6" (Max.) (36E Intersection to 36C Intersection)	±1,860ft
TOTAL PROPOSED LIQUID PIPELINE =	±2,210ft

Proposed Gas Pipeline	Length
Proposed 6" (Meter House to Edge of Pad)	±255ft
Proposed 6" (Edge of Pad to 36E Intersection)	±95ft
Proposed 16" (36E Intersection to 36C Intersection)	±1,860ft
TOTAL PROPOSED GAS PIPELINE =	±2,210ft

Legend

- Well - Proposed
- Well - Existing
- Well Pad
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 922-36D

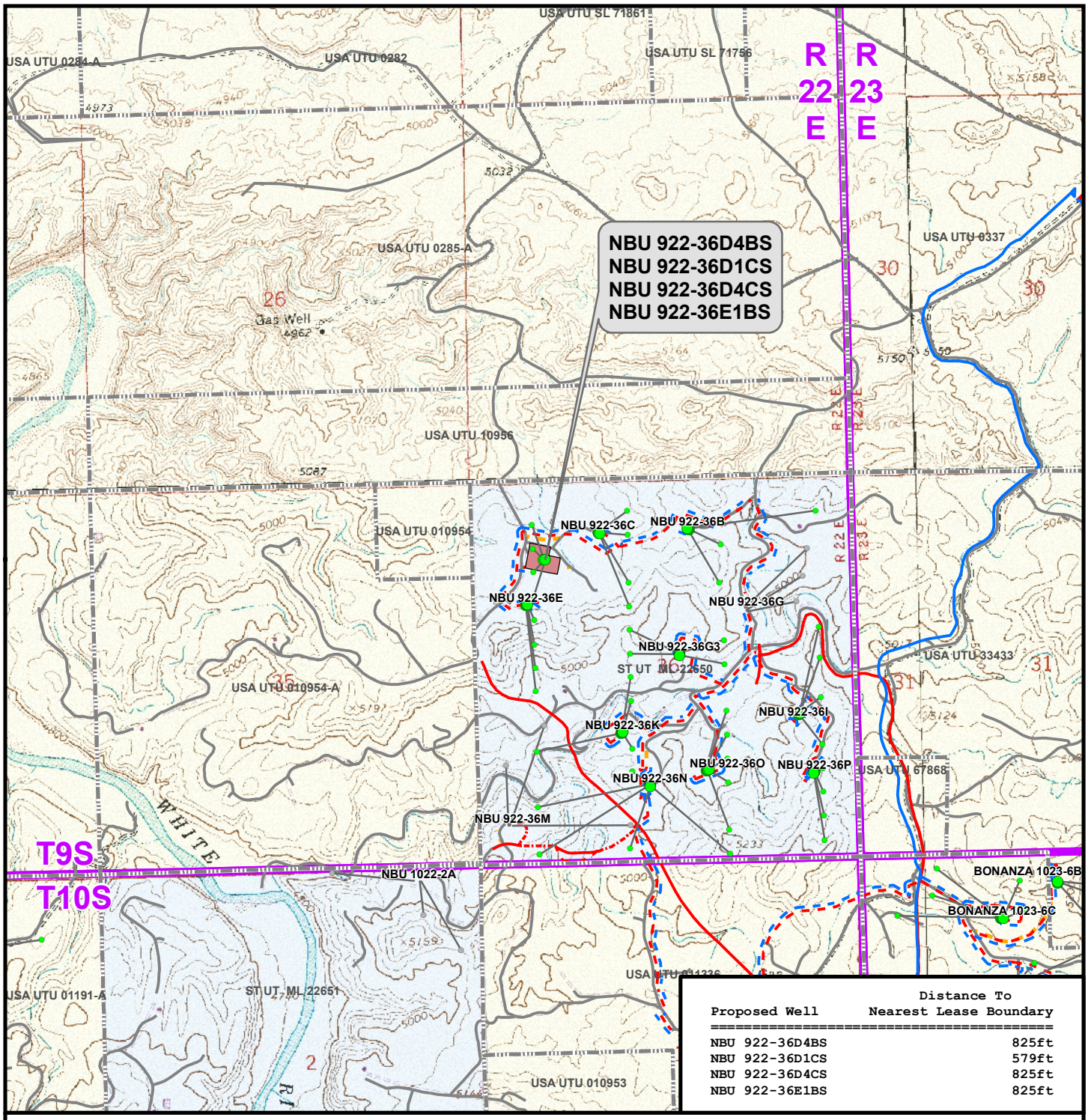
**TOPO D2 (PAD & PIPELINE DETAIL)
NBU 922-36D4BS, NBU 922-36D1CS,
NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E,
S.L.B.&M., UINTAH COUNTY, UTAH**

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 500ft	NAD83 USP Central	Sheet No: 14	
Drawn: TL	Date: 3 Dec 2010		14 of 16
Revised:	Date:		

API Well Number: 43047516190000



Proposed Well	Distance To Nearest Lease Boundary
NBU 922-36D4BS	825ft
NBU 922-36D1CS	579ft
NBU 922-36D4CS	825ft
NBU 922-36E1BS	825ft

Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street, Denver, Colorado 80202

WELL PAD - NBU 922-36D

TOPO E
NBU 922-36D4BS, NBU 922-36D1CS, NBU 922-36D4CS & NBU 922-36E1BS
LOCATED IN SECTION 36, T9S, R22E, S.L.B.&M., UINTAH COUNTY, UTAH

609 CONSULTING, LLC
2155 North Main Street
Sheridan, WY 82801
Phone (307) 674-0609
Fax (307) 674-0182

N

Scale: 1" = 2,000ft	NAD83 USP Central	Sheet No: 15	15 of 16
Drawn: TL	Date: 3 Dec 2010		
Revised:	Date:		

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – NBU 922-36D
WELLS – NBU 922-36D4BS, NBU 922-36D1CS,
NBU 922-36D4CS & NBU 922-36E1BS
Section 36, T9S, R22E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 14.4 miles to the intersection of the Fidlar Road (County B Road 3410) which road intersection is approximately 400 feet northeast of the Mountain Fuel Bridge at the White River. Exit left and proceed in a southeasterly direction along the Fidlar Road approximately 4.4 miles to the intersection of the Seven Sisters Road (County B Road 3420). Exit right and proceed in a southerly, then southeasterly direction along the Seven Sisters Road approximately 1.2 miles to a Class D County Road to the southwest. Exit right and proceed in a southwesterly, then southerly direction along the Class D County Road approximately 0.5 miles to a second Class D County Road to the west. Exit right and proceed in a westerly, then northwesterly direction along the second Class D County Road approximately 0.8 miles to a service road to the south. Exit left and proceed in a southerly direction along the service road approximately 0.7 miles to an access road to the southeast. Exit left and proceed in a southeasterly direction along the access road approximately 60 feet to the proposed well pad.

Total distance from Vernal, Utah to the proposed well location is approximately 45.5 miles in a southerly direction.

API Well Number: 43047516190000

Scientific Drilling
Rocky Mountain Operations

Project: Uintah County, UT UTM12
Site: NBU 922-36D PAD
Well: NBU 922-36D4CS
Wellbore: OH
Design: PLAN #1 2-9-11 RHS

Anadarko Petroleum Corporation

WELL DETAILS: NBU 922-36D4CS

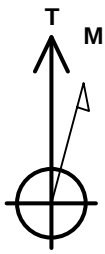
GL 5087' & 4'
@ 5091.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	14528969.01	2090356.88	39° 59' 48.826 N	109° 23' 36.654 W

DESIGN TARGET DETAILS

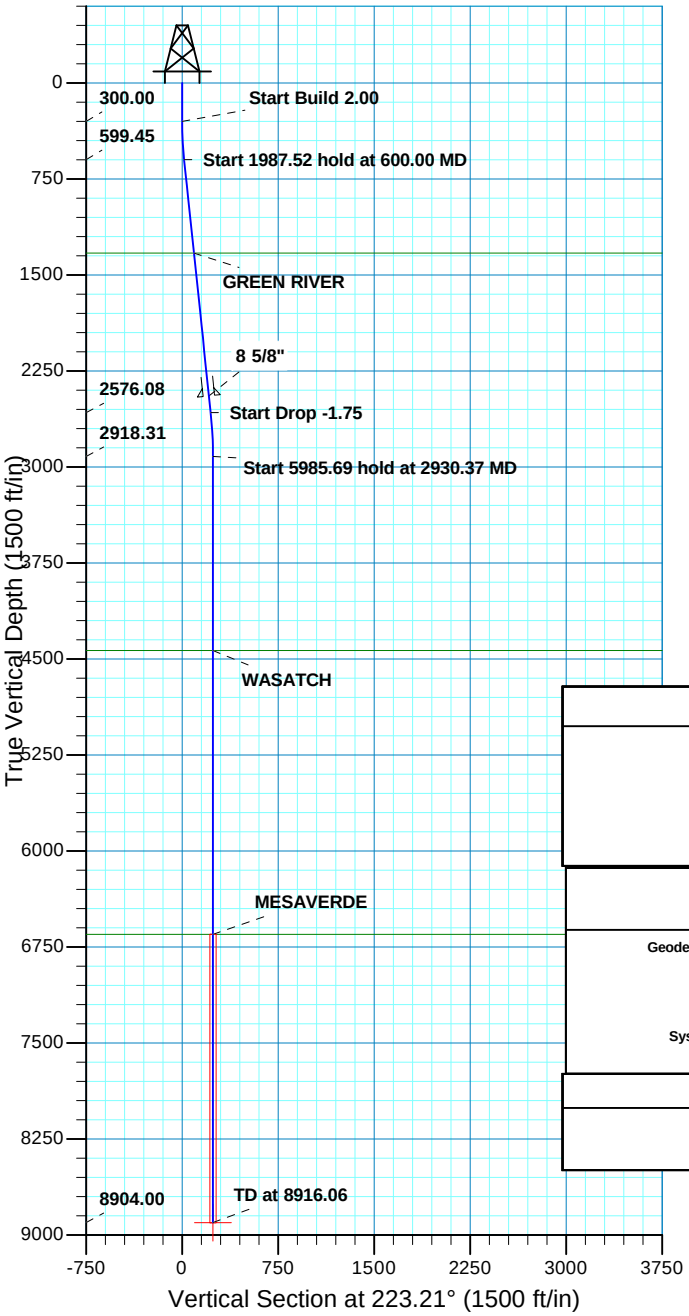
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	8904.00	-175.92	-165.28	14528790.14	2090194.79	39° 59' 47.087 N	109° 23' 38.778 W	Circle (Radius: 25.00)

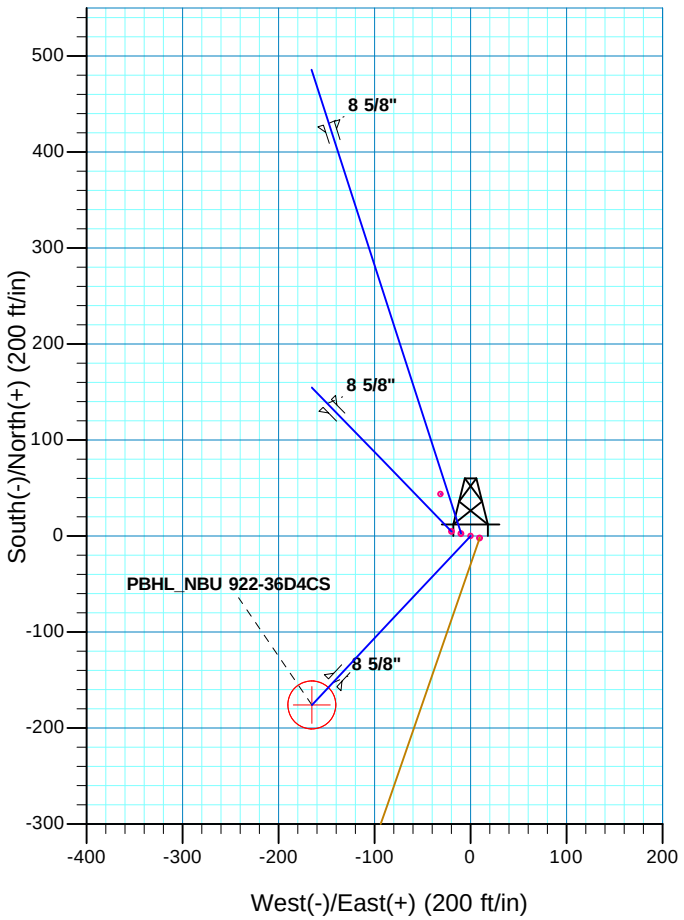
- plan hits target center



Azimuths to True North
Magnetic North: 11.07°

Magnetic Field
Strength: 52375.6snT
Dip Angle: 65.89°
Date: 02/09/2011
Model: IGRF2010





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
600.00	6.00	223.21	599.45	-11.44	-10.75	2.00	223.21	15.69	
2587.52	6.00	223.21	2576.08	-162.85	-153.00	0.00	0.00	223.45	
2930.37	0.00	0.00	2918.31	-175.92	-165.28	1.75	180.00	241.38	
8916.06	0.00	0.00	8904.00	-175.92	-165.28	0.00	0.00	241.38	PBHL_NBU 922-36D4CS

PROJECT DETAILS: Uintah County, UT UTM12

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 36 T9S R22E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1330.00	1334.57	GREEN RIVER
4435.00	4447.06	WASATCH
6651.00	6663.06	MESAVERDE

CASING DETAILS

TVD	MD	Name	Size
2445.00	2455.71	8 5/8"	8.625

Plan: PLAN #1 2-9-11 RHS (NBU 922-36D4CS/OH)

Created By: RobertScott Date: 16:18, February 09 2011

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 922-36D PAD
NBU 922-36D4CS

OH

Plan: PLAN #1 2-9-11 RHS

Standard Planning Report

09 February, 2011

Anadarko
Petroleum Corporation

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Site:	NBU 922-36D PAD	**North Reference:**	True
Well:	NBU 922-36D4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-9-11 RHS		

Project Uintah County, UT UTM12

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 922-36D PAD, SECTION 36 T9S R22E

Site Position:		**Northing:**	14,528,971.38 usft	**Latitude:**	39° 59' 48.851 N
From:	Lat/Long	**Easting:**	2,090,347.02 usft	**Longitude:**	109° 23' 36.780 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.03 °

Well NBU 922-36D4CS, 1064 FNL 990 FWL

Well Position	**+N/-S**	-2.55 ft	**Northing:**	14,528,969.01 usft	**Latitude:**	39° 59' 48.826 N
	+E/-W	9.80 ft	**Easting:**	2,090,356.87 usft	**Longitude:**	109° 23' 36.654 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,087.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/09/2011	11.07	65.89	52,376

Design PLAN #1 2-9-11 RHS

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	223.21

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	6.00	223.21	599.45	-11.44	-10.75	2.00	2.00	0.00	223.21	
2,587.52	6.00	223.21	2,576.08	-162.85	-153.00	0.00	0.00	0.00	0.00	
2,930.37	0.00	0.00	2,918.31	-175.92	-165.28	1.75	-1.75	0.00	180.00	
8,916.06	0.00	0.00	8,904.00	-175.92	-165.28	0.00	0.00	0.00	0.00	PBHL_NBU 922-36D4

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Site:	NBU 922-36D PAD	**North Reference:**	True
Well:	NBU 922-36D4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-9-11 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	223.21	399.98	-1.27	-1.19	1.75	2.00	2.00	0.00
500.00	4.00	223.21	499.84	-5.09	-4.78	6.98	2.00	2.00	0.00
600.00	6.00	223.21	599.45	-11.44	-10.75	15.69	2.00	2.00	0.00
Start 1987.52 hold at 600.00 MD									
700.00	6.00	223.21	698.90	-19.06	-17.90	26.15	0.00	0.00	0.00
800.00	6.00	223.21	798.36	-26.67	-25.06	36.60	0.00	0.00	0.00
900.00	6.00	223.21	897.81	-34.29	-32.22	47.05	0.00	0.00	0.00
1,000.00	6.00	223.21	997.26	-41.91	-39.38	57.51	0.00	0.00	0.00
1,100.00	6.00	223.21	1,096.71	-49.53	-46.53	67.96	0.00	0.00	0.00
1,200.00	6.00	223.21	1,196.17	-57.15	-53.69	78.41	0.00	0.00	0.00
1,300.00	6.00	223.21	1,295.62	-64.76	-60.85	88.86	0.00	0.00	0.00
1,334.57	6.00	223.21	1,330.00	-67.40	-63.32	92.48	0.00	0.00	0.00
GREEN RIVER									
1,400.00	6.00	223.21	1,395.07	-72.38	-68.01	99.32	0.00	0.00	0.00
1,500.00	6.00	223.21	1,494.52	-80.00	-75.16	109.77	0.00	0.00	0.00
1,600.00	6.00	223.21	1,593.97	-87.62	-82.32	120.22	0.00	0.00	0.00
1,700.00	6.00	223.21	1,693.43	-95.23	-89.48	130.67	0.00	0.00	0.00
1,800.00	6.00	223.21	1,792.88	-102.85	-96.63	141.13	0.00	0.00	0.00
1,900.00	6.00	223.21	1,892.33	-110.47	-103.79	151.58	0.00	0.00	0.00
2,000.00	6.00	223.21	1,991.78	-118.09	-110.95	162.03	0.00	0.00	0.00
2,100.00	6.00	223.21	2,091.23	-125.71	-118.11	172.49	0.00	0.00	0.00
2,200.00	6.00	223.21	2,190.69	-133.32	-125.26	182.94	0.00	0.00	0.00
2,300.00	6.00	223.21	2,290.14	-140.94	-132.42	193.39	0.00	0.00	0.00
2,400.00	6.00	223.21	2,389.59	-148.56	-139.58	203.84	0.00	0.00	0.00
2,455.71	6.00	223.21	2,445.00	-152.80	-143.57	209.67	0.00	0.00	0.00
8 5/8"									
2,500.00	6.00	223.21	2,489.04	-156.18	-146.74	214.30	0.00	0.00	0.00
2,587.52	6.00	223.21	2,576.08	-162.85	-153.00	223.45	0.00	0.00	0.00
Start Drop -1.75									
2,600.00	5.78	223.21	2,588.50	-163.78	-153.88	224.73	1.75	-1.75	0.00
2,700.00	4.03	223.21	2,688.13	-170.01	-159.73	233.28	1.75	-1.75	0.00
2,800.00	2.28	223.21	2,787.97	-174.03	-163.50	238.79	1.75	-1.75	0.00
2,900.00	0.53	223.21	2,887.94	-175.81	-165.19	241.24	1.75	-1.75	0.00
2,930.37	0.00	0.00	2,918.31	-175.92	-165.28	241.38	1.75	-1.75	0.00
Start 5985.69 hold at 2930.37 MD									
3,000.00	0.00	0.00	2,987.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,100.00	0.00	0.00	3,087.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,200.00	0.00	0.00	3,187.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,300.00	0.00	0.00	3,287.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,400.00	0.00	0.00	3,387.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,500.00	0.00	0.00	3,487.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,600.00	0.00	0.00	3,587.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,700.00	0.00	0.00	3,687.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,800.00	0.00	0.00	3,787.94	-175.92	-165.28	241.38	0.00	0.00	0.00
3,900.00	0.00	0.00	3,887.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,000.00	0.00	0.00	3,987.94	-175.92	-165.28	241.38	0.00	0.00	0.00

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Site:	NBU 922-36D PAD	**North Reference:**	True
Well:	NBU 922-36D4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-9-11 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,100.00	0.00	0.00	4,087.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,200.00	0.00	0.00	4,187.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,300.00	0.00	0.00	4,287.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,400.00	0.00	0.00	4,387.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,447.06	0.00	0.00	4,435.00	-175.92	-165.28	241.38	0.00	0.00	0.00
WASATCH									
4,500.00	0.00	0.00	4,487.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,600.00	0.00	0.00	4,587.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,700.00	0.00	0.00	4,687.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,800.00	0.00	0.00	4,787.94	-175.92	-165.28	241.38	0.00	0.00	0.00
4,900.00	0.00	0.00	4,887.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,000.00	0.00	0.00	4,987.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,100.00	0.00	0.00	5,087.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,200.00	0.00	0.00	5,187.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,300.00	0.00	0.00	5,287.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,400.00	0.00	0.00	5,387.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,500.00	0.00	0.00	5,487.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,600.00	0.00	0.00	5,587.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,700.00	0.00	0.00	5,687.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,800.00	0.00	0.00	5,787.94	-175.92	-165.28	241.38	0.00	0.00	0.00
5,900.00	0.00	0.00	5,887.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,000.00	0.00	0.00	5,987.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,100.00	0.00	0.00	6,087.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,200.00	0.00	0.00	6,187.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,300.00	0.00	0.00	6,287.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,400.00	0.00	0.00	6,387.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,500.00	0.00	0.00	6,487.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,600.00	0.00	0.00	6,587.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,663.06	0.00	0.00	6,651.00	-175.92	-165.28	241.38	0.00	0.00	0.00
MESAVERDE									
6,700.00	0.00	0.00	6,687.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,800.00	0.00	0.00	6,787.94	-175.92	-165.28	241.38	0.00	0.00	0.00
6,900.00	0.00	0.00	6,887.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,000.00	0.00	0.00	6,987.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,100.00	0.00	0.00	7,087.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,200.00	0.00	0.00	7,187.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,300.00	0.00	0.00	7,287.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,400.00	0.00	0.00	7,387.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,500.00	0.00	0.00	7,487.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,600.00	0.00	0.00	7,587.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,700.00	0.00	0.00	7,687.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,800.00	0.00	0.00	7,787.94	-175.92	-165.28	241.38	0.00	0.00	0.00
7,900.00	0.00	0.00	7,887.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,000.00	0.00	0.00	7,987.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,100.00	0.00	0.00	8,087.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,200.00	0.00	0.00	8,187.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,300.00	0.00	0.00	8,287.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,400.00	0.00	0.00	8,387.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,500.00	0.00	0.00	8,487.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,600.00	0.00	0.00	8,587.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,700.00	0.00	0.00	8,687.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,800.00	0.00	0.00	8,787.94	-175.92	-165.28	241.38	0.00	0.00	0.00

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Site:	NBU 922-36D PAD	**North Reference:**	True
Well:	NBU 922-36D4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-9-11 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,900.00	0.00	0.00	8,887.94	-175.92	-165.28	241.38	0.00	0.00	0.00
8,916.06	0.00	0.00	8,904.00	-175.92	-165.28	241.38	0.00	0.00	0.00
TD at 8916.06 - PBHL_NBU 922-36D4CS									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-36D4C - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,904.00	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,455.71	2,445.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,334.57	1,330.00	GREEN RIVER			
4,447.06	4,435.00	WASATCH			
6,663.06	6,651.00	MESAVERDE			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
600.00	599.45	-11.44	-10.75	Start 1987.52 hold at 600.00 MD
2,587.52	2,576.08	-162.85	-153.00	Start Drop -1.75
2,930.37	2,918.31	-175.92	-165.28	Start 5985.69 hold at 2930.37 MD
8,916.06	8,904.00	-175.92	-165.28	TD at 8916.06

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 922-36D PAD
NBU 922-36D4CS

OH

Plan: PLAN #1 2-9-11 RHS

Standard Planning Report - Geographic

09 February, 2011

Anadarko
Petroleum Corporation

Scientific Drilling
Rocky Mountain Operations

SDI
Planning Report - Geographic

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Site:	NBU 922-36D PAD	**North Reference:**	True
Well:	NBU 922-36D4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-9-11 RHS		

Project Uintah County, UT UTM12

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 922-36D PAD, SECTION 36 T9S R22E

Site Position:		**Northing:**	14,528,971.38 usft	**Latitude:**	39° 59' 48.851 N
From:	Lat/Long	**Easting:**	2,090,347.02 usft	**Longitude:**	109° 23' 36.780 W
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.03 °

Well NBU 922-36D4CS, 1064 FNL 990 FWL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,528,969.01 usft	**Latitude:**	39° 59' 48.826 N
	+E/-W	0.00 ft	**Easting:**	2,090,356.87 usft	**Longitude:**	109° 23' 36.654 W
Position Uncertainty		0.00 ft	**Wellhead Elevation:**		**Ground Level:**	5,087.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/09/2011	11.07	65.89	52,376

Design PLAN #1 2-9-11 RHS

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	223.21

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	6.00	223.21	599.45	-11.44	-10.75	2.00	2.00	0.00	223.21	
2,587.52	6.00	223.21	2,576.08	-162.85	-153.00	0.00	0.00	0.00	0.00	
2,930.37	0.00	0.00	2,918.31	-175.92	-165.28	1.75	-1.75	0.00	180.00	
8,916.06	0.00	0.00	8,904.00	-175.92	-165.28	0.00	0.00	0.00	0.00	PBHL_NBU 922-36D4

Scientific Drilling
Rocky Mountain Operations

SDI

Planning Report - Geographic

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Site:	NBU 922-36D PAD	**North Reference:**	True
Well:	NBU 922-36D4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-9-11 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,528,969.01	2,090,356.87	39° 59' 48.826 N	109° 23' 36.654 W
100.00	0.00	0.00	100.00	0.00	0.00	14,528,969.01	2,090,356.87	39° 59' 48.826 N	109° 23' 36.654 W
200.00	0.00	0.00	200.00	0.00	0.00	14,528,969.01	2,090,356.87	39° 59' 48.826 N	109° 23' 36.654 W
300.00	0.00	0.00	300.00	0.00	0.00	14,528,969.01	2,090,356.87	39° 59' 48.826 N	109° 23' 36.654 W
Start Build 2.00									
400.00	2.00	223.21	399.98	-1.27	-1.19	14,528,967.72	2,090,355.70	39° 59' 48.813 N	109° 23' 36.669 W
500.00	4.00	223.21	499.84	-5.09	-4.78	14,528,963.84	2,090,352.19	39° 59' 48.775 N	109° 23' 36.715 W
600.00	6.00	223.21	599.45	-11.44	-10.75	14,528,957.38	2,090,346.34	39° 59' 48.713 N	109° 23' 36.792 W
Start 1987.52 hold at 600.00 MD									
700.00	6.00	223.21	698.90	-19.06	-17.90	14,528,949.64	2,090,339.32	39° 59' 48.637 N	109° 23' 36.884 W
800.00	6.00	223.21	798.36	-26.67	-25.06	14,528,941.89	2,090,332.30	39° 59' 48.562 N	109° 23' 36.976 W
900.00	6.00	223.21	897.81	-34.29	-32.22	14,528,934.15	2,090,325.28	39° 59' 48.487 N	109° 23' 37.068 W
1,000.00	6.00	223.21	997.26	-41.91	-39.38	14,528,926.40	2,090,318.26	39° 59' 48.411 N	109° 23' 37.160 W
1,100.00	6.00	223.21	1,096.71	-49.53	-46.53	14,528,918.65	2,090,311.24	39° 59' 48.336 N	109° 23' 37.252 W
1,200.00	6.00	223.21	1,196.17	-57.15	-53.69	14,528,910.91	2,090,304.22	39° 59' 48.261 N	109° 23' 37.344 W
1,300.00	6.00	223.21	1,295.62	-64.76	-60.85	14,528,903.16	2,090,297.20	39° 59' 48.185 N	109° 23' 37.436 W
1,334.57	6.00	223.21	1,330.00	-67.40	-63.32	14,528,900.48	2,090,294.78	39° 59' 48.159 N	109° 23' 37.468 W
GREEN RIVER									
1,400.00	6.00	223.21	1,395.07	-72.38	-68.01	14,528,895.42	2,090,290.18	39° 59' 48.110 N	109° 23' 37.528 W
1,500.00	6.00	223.21	1,494.52	-80.00	-75.16	14,528,887.67	2,090,283.16	39° 59' 48.035 N	109° 23' 37.620 W
1,600.00	6.00	223.21	1,593.97	-87.62	-82.32	14,528,879.93	2,090,276.15	39° 59' 47.960 N	109° 23' 37.712 W
1,700.00	6.00	223.21	1,693.43	-95.23	-89.48	14,528,872.18	2,090,269.13	39° 59' 47.884 N	109° 23' 37.804 W
1,800.00	6.00	223.21	1,792.88	-102.85	-96.63	14,528,864.43	2,090,262.11	39° 59' 47.809 N	109° 23' 37.896 W
1,900.00	6.00	223.21	1,892.33	-110.47	-103.79	14,528,856.69	2,090,255.09	39° 59' 47.734 N	109° 23' 37.988 W
2,000.00	6.00	223.21	1,991.78	-118.09	-110.95	14,528,848.94	2,090,248.07	39° 59' 47.658 N	109° 23' 38.080 W
2,100.00	6.00	223.21	2,091.23	-125.71	-118.11	14,528,841.20	2,090,241.05	39° 59' 47.583 N	109° 23' 38.172 W
2,200.00	6.00	223.21	2,190.69	-133.32	-125.26	14,528,833.45	2,090,234.03	39° 59' 47.508 N	109° 23' 38.264 W
2,300.00	6.00	223.21	2,290.14	-140.94	-132.42	14,528,825.71	2,090,227.01	39° 59' 47.432 N	109° 23' 38.356 W
2,400.00	6.00	223.21	2,389.59	-148.56	-139.58	14,528,817.96	2,090,219.99	39° 59' 47.357 N	109° 23' 38.448 W
2,455.71	6.00	223.21	2,445.00	-152.80	-143.57	14,528,813.64	2,090,216.08	39° 59' 47.315 N	109° 23' 38.499 W
8 5/8"									
2,500.00	6.00	223.21	2,489.04	-156.18	-146.74	14,528,810.21	2,090,212.98	39° 59' 47.282 N	109° 23' 38.540 W
2,587.52	6.00	223.21	2,576.08	-162.85	-153.00	14,528,803.44	2,090,206.83	39° 59' 47.216 N	109° 23' 38.620 W
Start Drop -1.75									
2,600.00	5.78	223.21	2,588.50	-163.78	-153.88	14,528,802.49	2,090,205.97	39° 59' 47.207 N	109° 23' 38.631 W
2,700.00	4.03	223.21	2,688.13	-170.01	-159.73	14,528,796.15	2,090,200.23	39° 59' 47.145 N	109° 23' 38.707 W
2,800.00	2.28	223.21	2,787.97	-174.03	-163.50	14,528,792.07	2,090,196.53	39° 59' 47.105 N	109° 23' 38.755 W
2,900.00	0.53	223.21	2,887.94	-175.81	-165.19	14,528,790.25	2,090,194.88	39° 59' 47.088 N	109° 23' 38.777 W
2,930.37	0.00	0.00	2,918.31	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
Start 5985.69 hold at 2930.37 MD									
3,000.00	0.00	0.00	2,987.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,100.00	0.00	0.00	3,087.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,200.00	0.00	0.00	3,187.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,300.00	0.00	0.00	3,287.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,400.00	0.00	0.00	3,387.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,500.00	0.00	0.00	3,487.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,600.00	0.00	0.00	3,587.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,700.00	0.00	0.00	3,687.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,800.00	0.00	0.00	3,787.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
3,900.00	0.00	0.00	3,887.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,000.00	0.00	0.00	3,987.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,100.00	0.00	0.00	4,087.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W

Scientific Drilling
Rocky Mountain Operations

SDI

Planning Report - Geographic

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Site:	NBU 922-36D PAD	**North Reference:**	True
Well:	NBU 922-36D4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-9-11 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,200.00	0.00	0.00	4,187.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,300.00	0.00	0.00	4,287.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,400.00	0.00	0.00	4,387.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,447.06	0.00	0.00	4,435.00	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
WASATCH									
4,500.00	0.00	0.00	4,487.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,600.00	0.00	0.00	4,587.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,700.00	0.00	0.00	4,687.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,800.00	0.00	0.00	4,787.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
4,900.00	0.00	0.00	4,887.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,000.00	0.00	0.00	4,987.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,100.00	0.00	0.00	5,087.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,200.00	0.00	0.00	5,187.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,300.00	0.00	0.00	5,287.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,400.00	0.00	0.00	5,387.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,500.00	0.00	0.00	5,487.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,600.00	0.00	0.00	5,587.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,700.00	0.00	0.00	5,687.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,800.00	0.00	0.00	5,787.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
5,900.00	0.00	0.00	5,887.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,000.00	0.00	0.00	5,987.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,100.00	0.00	0.00	6,087.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,200.00	0.00	0.00	6,187.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,300.00	0.00	0.00	6,287.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,400.00	0.00	0.00	6,387.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,500.00	0.00	0.00	6,487.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,600.00	0.00	0.00	6,587.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,663.06	0.00	0.00	6,651.00	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
MESAVERDE									
6,700.00	0.00	0.00	6,687.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,800.00	0.00	0.00	6,787.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
6,900.00	0.00	0.00	6,887.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,000.00	0.00	0.00	6,987.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,100.00	0.00	0.00	7,087.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,200.00	0.00	0.00	7,187.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,300.00	0.00	0.00	7,287.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,400.00	0.00	0.00	7,387.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,500.00	0.00	0.00	7,487.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,600.00	0.00	0.00	7,587.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,700.00	0.00	0.00	7,687.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,800.00	0.00	0.00	7,787.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
7,900.00	0.00	0.00	7,887.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,000.00	0.00	0.00	7,987.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,100.00	0.00	0.00	8,087.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,200.00	0.00	0.00	8,187.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,300.00	0.00	0.00	8,287.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,400.00	0.00	0.00	8,387.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,500.00	0.00	0.00	8,487.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,600.00	0.00	0.00	8,587.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,700.00	0.00	0.00	8,687.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,800.00	0.00	0.00	8,787.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
8,900.00	0.00	0.00	8,887.94	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W

Scientific Drilling
Rocky Mountain Operations

SDI

Planning Report - Geographic

Anadarko Petroleum Corporation

Database:	EDM5000-RobertS-Local	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Company:	Kerr McGee Oil and Gas Onshore LP	**TVD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Project:	Uintah County, UT UTM12	**MD Reference:**	GL 5087' & 4' @ 5091.00ft (ASSUMED)
Site:	NBU 922-36D PAD	**North Reference:**	True
Well:	NBU 922-36D4CS	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 2-9-11 RHS		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,916.06	0.00	0.00	8,904.00	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W
TD at 8916.06 - PBHL_NBU 922-36D4CS									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_NBU 922-36D4C - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,904.00	-175.92	-165.28	14,528,790.14	2,090,194.79	39° 59' 47.087 N	109° 23' 38.778 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,455.71	2,445.00	8 5/8"	8.625	11.000

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,334.57	1,330.00	GREEN RIVER			
4,447.06	4,435.00	WASATCH			
6,663.06	6,651.00	MESAVERDE			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
600.00	599.45	-11.44	-10.75	Start 1987.52 hold at 600.00 MD
2,587.52	2,576.08	-162.85	-153.00	Start Drop -1.75
2,930.37	2,918.31	-175.92	-165.28	Start 5985.69 hold at 2930.37 MD
8,916.06	8,904.00	-175.92	-165.28	TD at 8916.06

NBU 922-36D1CS
Surface: 1062’ FNL 981’ FWL (NW/4NW/4)
BHL: 579’ FNL 825’ FWL (NW/4NW/4)

NBU 922-36D4BS
Surface: 1060’ FNL 971’ FWL (NW/4NW/4)
BHL: 910’ FNL 825’ FWL (NW/4NW/4)

NBU 922-36D4CS
Surface: 1064’ FNL 990’ FWL (NW/4NW/4)
BHL: 1241’ FNL 825’ FWL (NW/4NW/4)

NBU 922-36E1BS
Surface: 1067’ FNL 1000’ FWL (NW/4NW/4)
BHL: 1572’ FNL 825’ FWL (SW/4NW/4)

Pad: NBU 922-36D Pad
Section 36 T09S R22E
Mineral Lease: ML-22650

Uintah County, Utah
Operator: Kerr-McGee Oil & Gas Onshore LP

MULTI-POINT SURFACE USE PLAN of OPERATIONS (SUPO)

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to KMG (including, but not limited to, APDs/SULAs/ROEs/ROWs and/or easements).

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

A. Existing Roads:

Existing roads consist of county roads and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each

other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

One new access road is proposed (see Topo Map B). The ±160' road re-route will connect the East side of the pad to an existing road. Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the NBU 5-36B. The NBU 5-36B well location is a vertical well that is shut-in according to Utah Division of Oil, Gas and Mining (UDOGM) records as of April 13, 2011.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Production tanks will be constructed, maintained, and operated to prevent unauthorized surface or subsurface discharges of liquids and to prevent livestock or wildlife entry. The tanks are not to be used for disposal of liquids from additional sources without prior approval of UDOGM.

Gathering facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is ±2,210' and the individual segments are broken up as follows:

- ±255' (0.05 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2.
- ±95' (0.02 miles) –New 6" buried gas pipeline from the edge of pad to the proposed tie-in at the proposed 36E intersection. Please refer to Topo D.
- ±1,860' (0.4 miles) –New 16" buried gas pipeline from the 36E intersection to the tie-in point at the 36C intersection. Please refer to Topo D.

The total liquid gathering pipeline distance from the separator to the tie in point is ±2,210'and the individual segments are broken up as follows:

- ±255' (0.05 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2.
- ±95' (0.02 miles) –New 6" buried liquid pipeline from the edge of pad to the proposed tie-in at the proposed 36E intersection. Please refer to Topo D.
- ±1,860' (0.4 miles) –New 6" buried liquid pipeline from the 36E intersection to the proposed tie-in point at the 36C intersection. Please refer to Topo D.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way and 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.
Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods of Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E
Ouray #1 SWD in Sec. 1 T9S R21E
NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 33 T9S R21E
NBU 921-34L SWD in Sec. 34 T9S R21E

Drill cuttings and/or fluids will be contained in the reserve/frac pit. Cuttings will be buried in pit(s) upon

closure. Unless otherwise approved, no oil or other oil-based drilling additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water (as specified above), biodegradable polymer soap, bentonite clay, and/or non-toxic additives will be used in the mud system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into a pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternate is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods (e.g. solidification).

The reserve and/or fracture stimulation pit will be lined with a synthetic material 20-mil or thicker, The liner will be installed over smooth fill subgrade that is free of pockets, loose rocks, or other materials (i.e. sand, sifted dirt, bentonite, straw, etc.) that could damage the liner. Any additional pits necessary for subsequent operations, such as temporary flare or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of work at a well location.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal

of human and solid waste will be observed.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad, reserve/completion/flare pit, access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure, proposed cuts and fills, and topsoil and spoil material stockpile locations are depicted on the exhibits for each project where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but are not limited to: re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left “rough” after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final

reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:
SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

K. Other Information:

None

M. **Lessee's or Operators' Representative & Certification:**

Gina T. Becker
Regulatory Analyst II
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6086

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Gina T. Becker

May 12, 2011
Date

JOE JOHNSON
LANDMAN

KERR-MCGEE ONSHORE OIL & GAS, L.P.
1099 18TH STREET, SUITE 1800, DENVER, CO 80202
720-929-6708 • FAX 720-929-7708
E-MAIL: JOE.JOHNSON@ANADARKO.COM

April 13, 2011

Ms. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11
NBU 922-36D4CS
T9S-R22E
Section 36: NWNW/NWNW
Surface: 1064' FNL, 990' FWL
Bottom Hole: 1241' FNL, 825' FWL
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to the Exception to Location and Siting of Wells.

- Kerr-McGee's NBU 922-36D4CS is located within the Natural Buttes Unit area.
- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing road and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

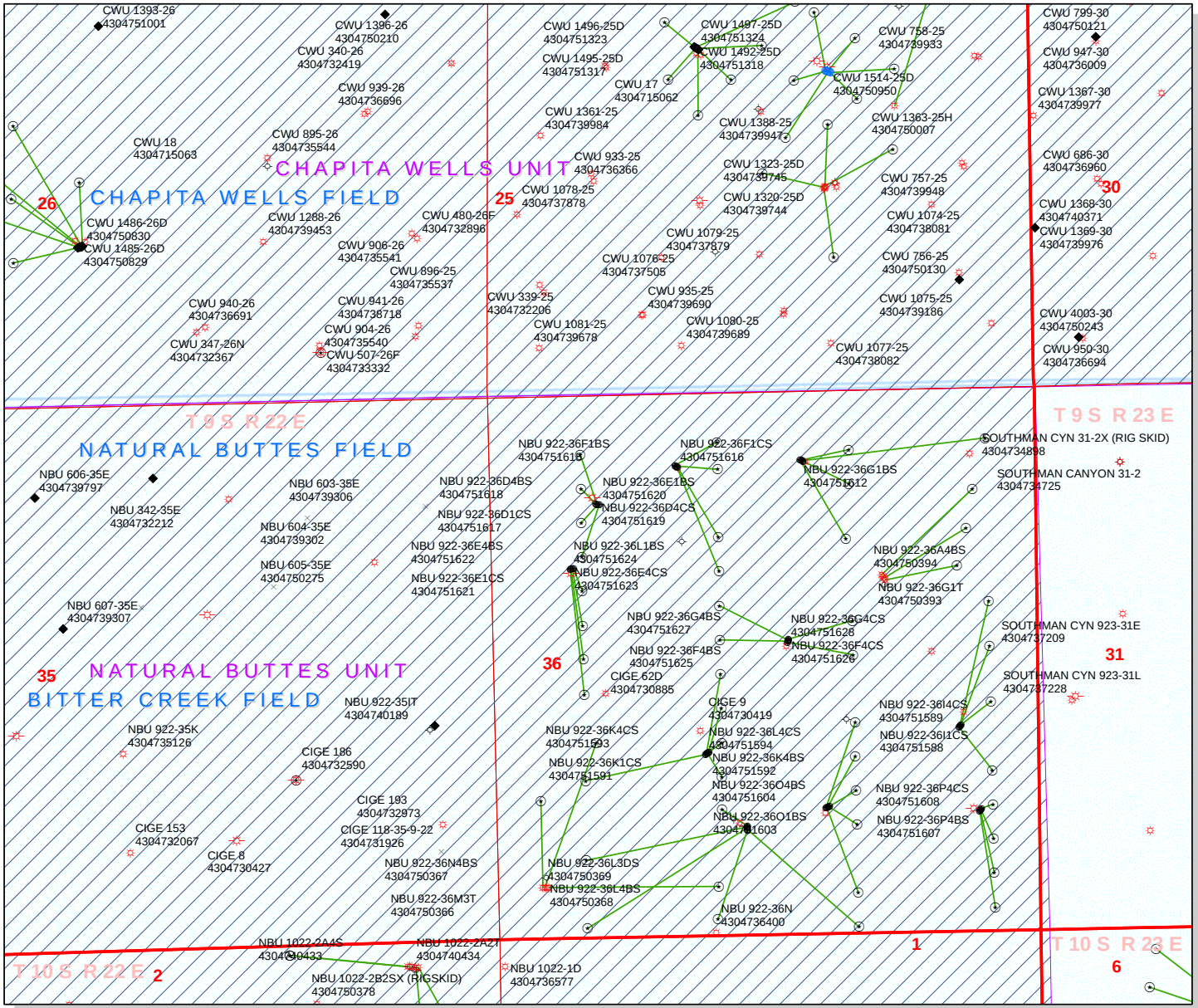
Therefore, based on the above stated information Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joseph D. Johnson
Landman

API Well Number: 43047516190000



API Number: 4304751619

Well Name: NBU 922-36D4CS

Township T0.9 . Range R2.2 . Section 36

Meridian: SLBM

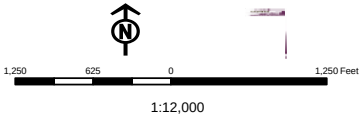
Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields
STATUS
- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED
- Sections
- Township

Wells Query
Status
- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LA - Location Abandoned
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- RET - Returned APD
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well



1:12,000

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:
3160
(UT-922)

May 20, 2011

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2011 Plan of Development Natural Buttes Unit
Uintah County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2011 within the Natural Buttes Unit, Uintah County, Utah.

API #	WELL NAME	LOCATION

(Proposed PZ WASATCH-MESA VERDE)

NBU 922-36I PAD

43-047-51586 NBU 922-36H4BS Sec 36 T09S R22E 2006 FSL 0799 FEL
BHL Sec 36 T09S R22E 2071 FNL 0494 FEL

43-047-51587 NBU 922-36H4CS Sec 36 T09S R22E 2014 FSL 0792 FEL
BHL Sec 36 T09S R22E 2508 FNL 0495 FEL

43-047-51588 NBU 922-36I1CS Sec 36 T09S R22E 2021 FSL 0785 FEL
BHL Sec 36 T09S R22E 2237 FSL 0494 FEL

43-047-51589 NBU 922-36I4CS Sec 36 T09S R22E 1999 FSL 0805 FEL
BHL Sec 36 T09S R22E 1574 FSL 0493 FEL

NBU 922-36K PAD

43-047-51590 NBU 922-36K1BS Sec 36 T09S R22E 1798 FSL 1998 FWL
BHL Sec 36 T09S R22E 2567 FSL 2148 FWL

43-047-51591 NBU 922-36K1CS Sec 36 T09S R22E 1809 FSL 2015 FWL
BHL Sec 36 T09S R22E 2236 FSL 2147 FWL

43-047-51592 NBU 922-36K4BS Sec 36 T09S R22E 1815 FSL 2023 FWL
BHL Sec 36 T09S R22E 1904 FSL 2147 FWL

43-047-51593 NBU 922-36K4CS Sec 36 T09S R22E 1804 FSL 2006 FWL
BHL Sec 36 T09S R22E 1573 FSL 2146 FWL

43-047-51594 NBU 922-36L4CS Sec 36 T09S R22E 1793 FSL 1990 FWL
BHL Sec 36 T09S R22E 1565 FSL 0821 FWL

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE

NBU 922-36N PAD

43-047-51595 NBU 922-36M1CS Sec 36 T09S R22E 1078 FSL 2379 FWL
BHL Sec 36 T09S R22E 0792 FSL 0816 FWL

43-047-51596 NBU 922-36M4CS Sec 36 T09S R22E 1068 FSL 2379 FWL
BHL Sec 36 T09S R22E 0132 FSL 0819 FWL

43-047-51597 NBU 922-36N1BS Sec 36 T09S R22E 1088 FSL 2379 FWL
BHL Sec 36 T09S R22E 1253 FSL 2140 FWL

43-047-51598 NBU 922-36N4CS Sec 36 T09S R22E 1048 FSL 2379 FWL
BHL Sec 36 T09S R22E 0190 FSL 2081 FWL

43-047-51599 NBU 922-36O4CS Sec 36 T09S R22E 1058 FSL 2379 FWL
BHL Sec 36 T09S R22E 0085 FSL 1814 FEL

NBU 922-36O PAD

43-047-51600 NBU 922-36J1CS Sec 36 T09S R22E 1247 FSL 2113 FEL
BHL Sec 36 T09S R22E 2071 FSL 1809 FEL

43-047-51601 NBU 922-36J4BS Sec 36 T09S R22E 1254 FSL 2094 FEL
BHL Sec 36 T09S R22E 1740 FSL 1816 FEL

43-047-51602 NBU 922-36J4CS Sec 36 T09S R22E 1261 FSL 2075 FEL
BHL Sec 36 T09S R22E 1409 FSL 1816 FEL

43-047-51603 NBU 922-36O1BS Sec 36 T09S R22E 1257 FSL 2085 FEL
BHL Sec 36 T09S R22E 1078 FSL 1815 FEL

43-047-51604 NBU 922-36O4BS Sec 36 T09S R22E 1250 FSL 2103 FEL
BHL Sec 36 T09S R22E 0415 FSL 1814 FEL

NBU 922-36P PAD

43-047-51605 NBU 922-36P1BS Sec 36 T09S R22E 1207 FSL 0606 FEL
BHL Sec 36 T09S R22E 1243 FSL 0493 FEL

43-047-51606 NBU 922-36P1CS Sec 36 T09S R22E 1198 FSL 0611 FEL
BHL Sec 36 T09S R22E 0911 FSL 0493 FEL

43-047-51607 NBU 922-36P4BS Sec 36 T09S R22E 1189 FSL 0616 FEL
BHL Sec 36 T09S R22E 0580 FSL 0493 FEL

43-047-51608 NBU 922-36P4CS Sec 36 T09S R22E 1181 FSL 0621 FEL
BHL Sec 36 T09S R22E 0243 FSL 0492 FEL

NBU 922-36B PAD

43-047-51609 NBU 922-36A1CS Sec 36 T09S R22E 0678 FNL 2273 FEL
BHL Sec 36 T09S R22E 0485 FNL 0494 FEL

43-047-51610 NBU 922-36B1CS Sec 36 T09S R22E 0674 FNL 2282 FEL
BHL Sec 36 T09S R22E 0579 FNL 1821 FEL

43-047-51611 NBU 922-36B4BS Sec 36 T09S R22E 0682 FNL 2264 FEL
BHL Sec 36 T09S R22E 0905 FNL 1828 FEL

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE

43-047-51612 NBU 922-36G1BS Sec 36 T09S R22E 0671 FNL 2291 FEL
BHL Sec 36 T09S R22E 1439 FNL 1861 FEL

NBU 922-36C PAD

43-047-51613 NBU 922-36C1CS Sec 36 T09S R22E 0700 FNL 1741 FWL
BHL Sec 36 T09S R22E 0485 FNL 2152 FWL

43-047-51614 NBU 922-36C4BS Sec 36 T09S R22E 0706 FNL 1749 FWL
BHL Sec 36 T09S R22E 0746 FNL 2153 FWL

43-047-51615 NBU 922-36F1BS Sec 36 T09S R22E 0718 FNL 1765 FWL
BHL Sec 36 T09S R22E 1407 FNL 2151 FWL

43-047-51616 NBU 922-36F1CS Sec 36 T09S R22E 0712 FNL 1757 FWL
BHL Sec 36 T09S R22E 1738 FNL 2150 FWL

NBU 922-36D PAD

43-047-51617 NBU 922-36D1CS Sec 36 T09S R22E 1062 FNL 0981 FWL
BHL Sec 36 T09S R22E 0579 FNL 0825 FWL

43-047-51618 NBU 922-36D4BS Sec 36 T09S R22E 1060 FNL 0971 FWL
BHL Sec 36 T09S R22E 0910 FNL 0825 FWL

43-047-51619 NBU 922-36D4CS Sec 36 T09S R22E 1064 FNL 0990 FWL
BHL Sec 36 T09S R22E 1241 FNL 0825 FWL

43-047-51620 NBU 922-36E1BS Sec 36 T09S R22E 1067 FNL 1000 FWL
BHL Sec 36 T09S R22E 1572 FNL 0825 FWL

NBU 922-36E PAD

43-047-51621 NBU 922-36E1CS Sec 36 T09S R22E 1682 FNL 0739 FWL
BHL Sec 36 T09S R22E 1903 FNL 0824 FWL

43-047-51622 NBU 922-36E4BS Sec 36 T09S R22E 1684 FNL 0729 FWL
BHL Sec 36 T09S R22E 2245 FNL 0818 FWL

43-047-51623 NBU 922-36E4CS Sec 36 T09S R22E 1686 FNL 0719 FWL
BHL Sec 36 T09S R22E 2565 FNL 0824 FWL

43-047-51624 NBU 922-36L1BS Sec 36 T09S R22E 1688 FNL 0709 FWL
BHL Sec 36 T09S R22E 2401 FSL 0824 FWL

NBU 922-36G3 PAD

43-047-51625 NBU 922-36F4BS Sec 36 T09S R22E 2414 FNL 2443 FEL
BHL Sec 36 T09S R22E 2070 FNL 2149 FWL

43-047-51626 NBU 922-36F4CS Sec 36 T09S R22E 2424 FNL 2445 FEL
BHL Sec 36 T09S R22E 2401 FNL 2149 FWL

43-047-51627 NBU 922-36G4BS Sec 36 T09S R22E 2405 FNL 2441 FEL
BHL Sec 36 T09S R22E 2235 FNL 1818 FEL

43-047-51628 NBU 922-36G4CS Sec 36 T09S R22E 2434 FNL 2447 FEL
BHL Sec 36 T09S R22E 2566 FNL 1818 FEL

This office has no objection to permitting the wells at this time.

Michael L. Coulthard

Digitally signed by Michael L. Coulthard
DN: cn=Michael L. Coulthard, o=Bureau of Land Management, ou=Branch of Minerals, email=Michael_Coulthard@blm.gov, c=US
Date: 2011.05.23 07:16:05 -06'00'

bcc: File - Natural Buttes Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:5-20-11

From: Jim Davis
To: Bonner, Ed; Garrison, LaVonne; Hill, Brad; Mason, Diana
CC: Gina Becker; Lytle, Andy
Date: 6/8/2011 3:00 PM
Subject: Kerr McGee APD approvals.

The following APDs have been approved by SITLA including arch and paleo clearance.

4304751586	NBU 922-36H4BS
4304751587	NBU 922-36H4CS
4304751588	NBU 922-36I1CS
4304751589	NBU 922-36I4CS
4304751590	NBU 922-36K1BS
4304751591	NBU 922-36K1CS
4304751592	NBU 922-36K4BS
4304751593	NBU 922-36K4CS
4304751594	NBU 922-36L4CS
4304751595	NBU 922-36M1CS
4304751596	NBU 922-36M4CS
4304751597	NBU 922-36N1BS
4304751598	NBU 922-36N4CS
4304751599	NBU 922-36O4CS
4304751600	NBU 922-36J1CS
4304751601	NBU 922-36J4BS
4304751602	NBU 922-36J4CS
4304751603	NBU 922-36O1BS
4304751604	NBU 922-36O4BS
4304751605	NBU 922-36P1BS
4304751606	NBU 922-36P1CS
4304751607	NBU 922-36P4BS
4304751608	NBU 922-36P4CS
4304751613	NBU 922-36C1CS
4304751614	NBU 922-36C4BS
4304751615	NBU 922-36F1BS
4304751616	NBU 922-36F1CS
4304751617	NBU 922-36D1CS
4304751618	NBU 922-36D4BS
4304751619	NBU 922-36D4CS
4304751620	NBU 922-36E1BS
4304751621	NBU 922-36E1CS
4304751622	NBU 922-36E4BS
4304751623	NBU 922-36E4CS
4304751624	NBU 922-36L1BS
4304751625	NBU 922-36F4BS
4304751626	NBU 922-36F4CS
4304751627	NBU 922-36G4BS
4304751628	NBU 922-36G4CS

Full paleo monitoring is a required condition for the approval of these APDs- as recommended in the paleo report.

4304751609	NBU 922-36A1CS
4304751610	NBU 922-36B1CS
4304751611	NBU 922-36B4BS
4304751612	NBU 922-36G1BS

Thanks.
-Jim

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov
Phone: (801) 538-5156

API Well Number: 43047516190000

BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-36D4CS 43047516190000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. NBU 922-36D4CS			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2439	8904		
Previous Shoe Setting Depth (TVD)	40	2439		
Max Mud Weight (ppg)	8.4	12.5		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	7780		
Operators Max Anticipated Pressure (psi)	5699	12.3		

Calculations	Surf String	8.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	1065		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	772	NO	air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	528	NO	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	537	NO	Reasonable for area
Required Casing/BOPE Test Pressure=		2373	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		40	psi *Assumes 1psi/ft frac gradient	

Calculations	Prod String	4.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	5788		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	4720	YES	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	3829	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	4366	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		2439	psi *Assumes 1psi/ft frac gradient	

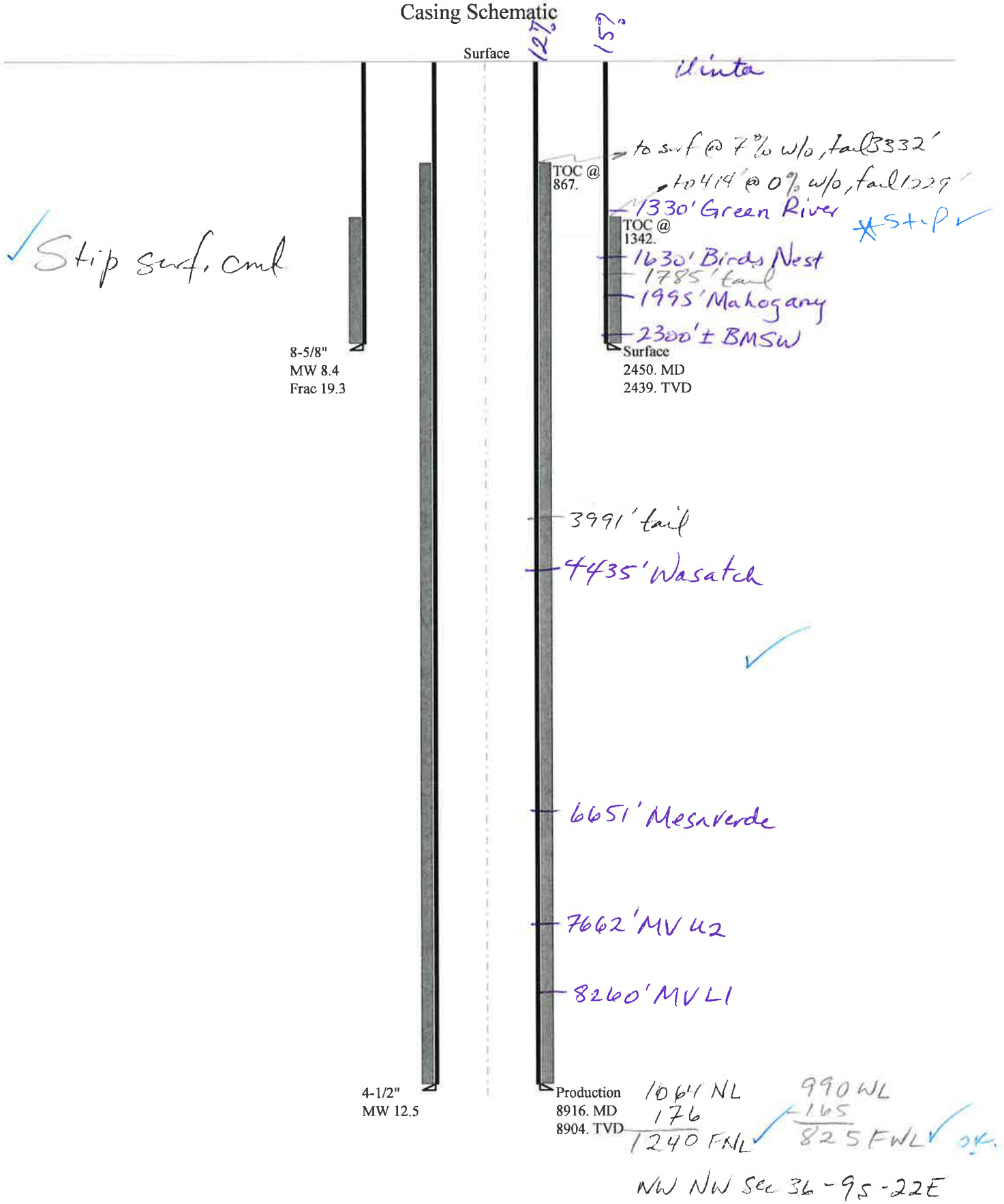
Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	

***Max Pressure Allowed @ Previous Casing Shoe=**		psi *Assumes 1psi/ft frac gradient

43047516190000 NBU 922-36D4CS

Casing Schematic



Well name:	**43047516190000 NBU 922-36D4CS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Surface
Project ID:	43-047-51619
Location:	UINTAH COUNTY

Design parameters:

Collapse
Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 2,156 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,449 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 2,146 ft

Environment:
H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 108 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,342 ft

Directional Info - Build & Drop
Kick-off point 300 ft
Departure at shoe: 209 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 6 °

Re subsequent strings:
Next setting depth: 8,916 ft
Next mud weight: 12.500 ppg
Next setting BHP: 5,790 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,450 ft
Injection pressure: 2,450 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	2450	8.625	28.00	I-55	LT&C	2439	2450	7.892	97020

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1064	1880	1.766	2449	3390	1.38	68.3	348	5.10 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: July 20,2011
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 2439 ft, a mud weight of 8.4 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	**43047516190000 NBU 922-36D4CS**
Operator:	**KERR-MCGEE OIL & GAS ONSHORE, L.P.**
String type:	Production
Project ID:	43-047-51619
Location:	UINTAH COUNTY

Design parameters:

Collapse

Mud weight:	12.500 ppg
Internal fluid density:	1.000 ppg

Burst

Max anticipated surface pressure:	3,823 psi
Internal gradient:	0.220 psi/ft
Calculated BHP	5,782 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor	1.125

Burst:

Design factor	1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.60 (B)

Tension is based on air weight.
Neutral point: 7,252 ft

Environment:

H2S considered?	No
Surface temperature:	74 °F
Bottom hole temperature:	199 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	100 ft
Cement top:	867 ft

Directional Info - Build & Drop

Kick-off point	300 ft
Departure at shoe:	241 ft
Maximum dogleg:	2 °/100ft
Inclination at shoe:	0 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	8916	4.5	11.60	I-80	LT&C	8904	8916	3.875	117691

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5319	6360	1.196	5782	7780	1.35	103.3	212	2.05 J

Prepared by: Helen Sadik-Macdonald, Div of Oil,Gas & Mining
Phone: 801 538-5357
FAX: 801-359-3940
Date: July 20,2011
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 8904 ft, a mud weight of 12.5 ppg An internal gradient of .052 psi/ft was used for collapse from TD
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.								
Well Name	NBU 922-36D4CS								
API Number	43047516190000		**APD No**	3793	**Field/Unit**	NATURAL BUTTES			
Location: 1/4,1/4	NWNW	**Sec** 36	**Tw** 9.0S	**Rng** 22.0E	1064	FNL	990	FWL	
GPS Coord (UTM)	637141 4428440		**Surface Owner**						

Participants

Floyd Bartlett (DOGM), Sheila Wopsock, Lovell Young, Gina Becker, Mark Koehn, Griz Oleen (Kerr McGee), Ben Williams (UDWR) and Mitch Batty, John Slaugh (Timberline Engineering and Land Surveying).

Regional/Local Setting & Topography

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¾ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 42 air miles to the northwest. Access from Vernal is approximately 45.5 road miles following Utah State, Uintah County and oilfield development roads to the location.

Four additional gas wells will be added to and directionally drilled from the NBU 922-36D pad. They are the NBU 922-36D4BS, NBU 922-36D1CS, NBU 922-36D4CS and NBU 922-36E1BS. The pad contains the existing NBU 5-3B gas well which is currently shut-in. The existing pad will be significantly enlarged in all directions with most of the extension to the west and south onto undulating topography. A diversion around the reserve pit area will be formed by the excess spoils. A small pond currently exists outside corner 2. It will be moved to the south and re-established by the excess spoils stockpile in that area. A road and pipeline exist to the north of the proposed expansion. Maximum cut is 8.2 feet at Corner 2 and maximum fill is 1.9 feet at Pit Corner C. The White River is approximately 1 mile to the west. The existing pad shows no stability problems and the site has no apparent concerns for constructing an enlarged pad and drilling and operating the planned wells. It is the only suitable location in the immediate area.

Both the surface and minerals are owned by SITLA.

Surface Use Plan

Current Surface Use
Grazing
Wildlfe Habitat
Existing Well Pad

New Road Miles	**Well Pad**	**Src Const Material**	**Surface Formation**
0	**Width** 352 **Length** 455	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Area beyond the existing pad is poorly vegetated with greasewood, cheatgrass, black sagebrush, broom snakeweed, globemallow, Sitanion hystrix , shadscale, rabbitbrush, pepper weed, halogeton and annuals.

Sheep, deer, antelope, coyote, and other small mammals and birds.

Soil Type and Characteristics

Shallow rocky sandy loam.

Erosion Issues N

Sedimentation Issues Y

Site Stability Issues N

Drainage Diverson Required? Y

A diversion around the reserve pit area will be formed by the excess spoils.

Berm Required? N

Erosion Sedimentation Control Required? Y

A diversion around the reserve pit area will be formed by the excess spoils.

Paleo Survey Run? Y **Paleo Potental Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	100 to 200	15	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	55	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned mostly in an area of cut in the northwest side of the location. Dimensions are 120’ x 260’ x 12’ deep with 2’ of freeboard. Corner C is in 1.9 feet of cut. With the outside 15 foot bench, the spoils pile beyond the pit, the planned 30 mil. liner and the freeboard, it should be stable. Because the length of time the reserve pit will be used and the roughness of the terrain, Kerr McGee committed to line it with a 30-mil.liner and an appropriate thickness of felt sub-liner to cushion the rock.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y

Other Observations / Comments

Floyd Bartlett	5/24/2011
Evaluator	**Date / Time**

Application for Permit to Drill
Statement of Basis

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
3793	43047516190000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		**Surface Owner-APD**		
Well Name	NBU 922-36D4CS		**Unit**	NATURAL BUTTES	
Field	NATURAL BUTTES		**Type of Work**	DRILL	
Location	NWNW 36 9S 22E S 1064 FNL 990 FWL		GPS Coord (UTM)	637141E	4428439N

Geologic Statement of Basis

Kerr McGee proposes to set 2,450’ of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 2,300'. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the proposed location . The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect any usable ground water.

Brad Hill — **APD Evaluator**

6/20/2011 — **Date / Time**

Surface Statement of Basis

The general area is in the southeast portion of the Natural Buttes Unit, which contains the White River and rugged drainages that drain into the White River. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River varies from ¾ mile to 2 miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 42 air miles to the northwest. Access from Vernal is approximately 45.5 road miles following Utah State, Uintah County and oilfield development roads to the location.

Four additional gas wells will be added to and directionally drilled from the NBU 922-36D pad. They are the NBU 922-36D4BS, NBU 922-36D1CS, NBU 922-36D4CS and NBU 922-36E1BS. The pad contains the existing NBU 5-3B gas well which is currently shut-in. The existing pad will be significantly enlarged in all directions with most of the extension to the west and south onto undulating topography. A diversion around the reserve pit area will be formed by the excess spoils. A small pond currently exists outside corner 2. It will be moved to the south and re-established by the excess spoils stockpile in that area. A road and pipeline exist to the north of the proposed expansion. Maximum cut is 8.2 feet at Corner 2 and maximum fill is 1.9 feet at Pit Corner C. The White River is approximately 1 mile to the west. The existing pad shows no stability problems and the site has no apparent concerns for constructing an enlarged pad and drilling and operating the planned wells. It is the only suitable location in the immediate area.

Both the surface and minerals are owned by SITLA. Ed Bonner and Jim Davis of SITLA were invited to attend the pre-site evaluation. Neither attended. SITLA is to be contacted for reclamation standards including a seed mix to be used.

Ben Williams of the Utah Division of Wildlife Resources attended the pre-site. Mr. Williams stated no wildlife values would be significantly affected by drilling and operating the additional wells at this location.

Floyd Bartlett — **Onsite Evaluator**

5/24/2011 — **Date / Time**

Application for Permit to Drill
Statement of Basis

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 5/13/2011 **API NO. ASSIGNED:** 43047516190000
WELL NAME: NBU 922-36D4CS
OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) **PHONE NUMBER:** 720 929-6086
CONTACT: Gina Becker

PROPOSED LOCATION: NWNW 36 090S 220E **Permit Tech Review:** ☑
SURFACE: 1064 FNL 0990 FWL **Engineering Review:** ☑
BOTTOM: 1241 FNL 0825 FWL **Geology Review:** ☑
COUNTY: UINTAH
LATITUDE: 39.99690 **LONGITUDE:** -109.39353
UTM SURF EASTINGS: 637141.00 **NORTHINGS:** 4428439.00
FIELD NAME: NATURAL BUTTES
LEASE TYPE: 3 - State
LEASE NUMBER: ML-22650 **PROPOSED PRODUCING FORMATION(S):** WASATCH-MESA VERDE
SURFACE OWNER: 3 - State **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** STATE/FEE - 22013542
- ☐ **Potash**
- ☑ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** Permit #43-8496
- ☐ **RDCC Review:**
- ☐ **Fee Surface Agreement**
- ☑ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit: NATURAL BUTTES

- ☐ **R649-3-2. General**
- ☐ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: Cause 173-14
Effective Date: 12/2/1999
Siting: Suspends General Siting

- ☑ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:
3 - Commingling - ddoucet
5 - Statement of Basis - bhill
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason
25 - Surface Casing - hmacdonald

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill

****

Well Name: NBU 922-36D4CS
API Well Number: 43047516190000
Lease Number: ML-22650
Surface Owner: STATE
Approval Date: 8/3/2011

Issued to:
KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:
Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:
In accordance with Board Cause No. 173-14, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

Surface casing shall be cemented to the surface.

Additional Approvals:
The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well – contact Carol Daniels
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

Contact Information:
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
  801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
  801-231-8956 - after office hours

Reporting Requirements:
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) – due within 5 days of spudding the well
- Monthly Status Report (Form 9) – due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) – due prior to implementation
- Written Notice of Emergency Changes (Form 9) – due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) – due prior to implementation
- Report of Water Encountered (Form 7) – due within 30 days after completion
- Well Completion Report (Form 8) – due within 30 days after completion or plugging

Approved By:

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
ML-22650

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:
NATURAL BUTTES

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
NBU 922-36D4CS

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047516190000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6526

9. FIELD and POOL or WILDCAT:
NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
1064 FNL 0990 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWNW Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☑ SPUD REPORT Date of Spud: 2/20/2012	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU TRIPPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 02/20/2012 AT 1500 HRS.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
March 01, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst
SIGNATURE		**DATE**
N/A		2/22/2012

RECEIVED: Feb. 22, 2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 922-36D4CS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047516190000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6515

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1064 FNL 0990 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 2/28/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU AIR RIG ON FEBRUARY 26, 2012. DRILLED SURFACE HOLE TO 2,591'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
March 01, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE N/A		**DATE** 2/28/2012

SUBMIT AS EMAIL | Print Form

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By SHEILA WOPSOCK Phone Number 435.781.7024
Well Name/Number NBU 922-36D4CS
Qtr/Qtr NWNW Section 36 Township 9S Range 22E
Lease Serial Number ML-22650
API Number 4304751619

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 02/20/2012 1100 HRS AM ☑ PM ☐

Casing – Please report time casing run starts, not cementing times.

☑ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

RECEIVED
FEB 19 2012
DIV. OF OIL, GAS & MINING

Date/Time 02/28/2012 0800 HRS AM ☑ PM ☐

BOPE

☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT ~~LOVEL YOUNG AT 435.781.7051 FOR MORE~~

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078
Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751620	NBU 922-36E1BS		NWNW	36	9S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	2/20/2012			2/29/2012	

Comments: MIRU TRIPPLE A BUCKET RIG.
SPUD WELL ON 02/20/2012 AT 1900 HRS. BHL: SWNW
WSMVD

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751619	NBU 922-36D4CS		NWNW	36	9S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	2/20/2012			2/29/2012	

Comments: MIRU TRIPPLE A BUCKET RIG.
SPUD WELL ON 02/20/2012 AT 1500 HRS. BHL: NWNW
WSMVD

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304751617	NBU 922-36D1CS		NWNW	36	9S	22E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	2900	2/20/2012			2/29/2012	

Comments: MIRU TRIPPLE A BUCKET RIG.
SPUD WELL ON 02/20/2012 AT 1100 HRS. BHL: NWNW
WSMVD

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

SHEILA WOPSOCK
Name (Please Print)
Signature
REGULATORY ANALYST
Title
2/22/2012
Date

RECEIVED
FEB 27 2012
Div. of Oil, Gas & Mining

(5/2000)

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 922-36D4CS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047516190000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 **PHONE NUMBER:** 720 929-6515

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1064 FNL 0990 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 3/12/2012	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	✓ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator requests approval for changes in the drilling plan. Specifically, the Operator requests approval for a FIT waiver, closed loop drilling option, and a production casing change. All other aspects of the previously approved drilling plan will not change. These proposals do not deviate from previously submitted and approved plans. Please see attachments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: March 20, 2012

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE N/A		**DATE** 3/12/2012

RECEIVED: Mar. 12, 2012

Kerr-McGee Oil & Gas Onshore. L.P.

NBU 922-36D4CS

Surface: 1064 FNL / 990 FWL NWNW
BHL: 1241 FNL / 825 FWL NWNW

Section 36 T9S R22E

Uintah County, Utah
Mineral Lease: ML-22650

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	1,331'	
Birds Nest	1,643'	Water
Mahogany	2,102'	Water
Wasatch	4,434'	Gas
Mesaverde	6,652'	Gas
Sego	8,904'	Gas
TVD	8,904'	
TD	8,916'	

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Drilling Program

4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program

6. **Evaluation Program:**

Please refer to the attached Drilling Program

RECEIVED: Mar. 12, 2012

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 8904' TVD, approximately equals 5,699 psi 0.64 psi/ft = actual bottomhole gradient

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,727 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

RECEIVED: Mar. 12, 2012

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements
The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements
Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements
Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and

RECEIVED: Mar. 12, 2012

on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements
KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

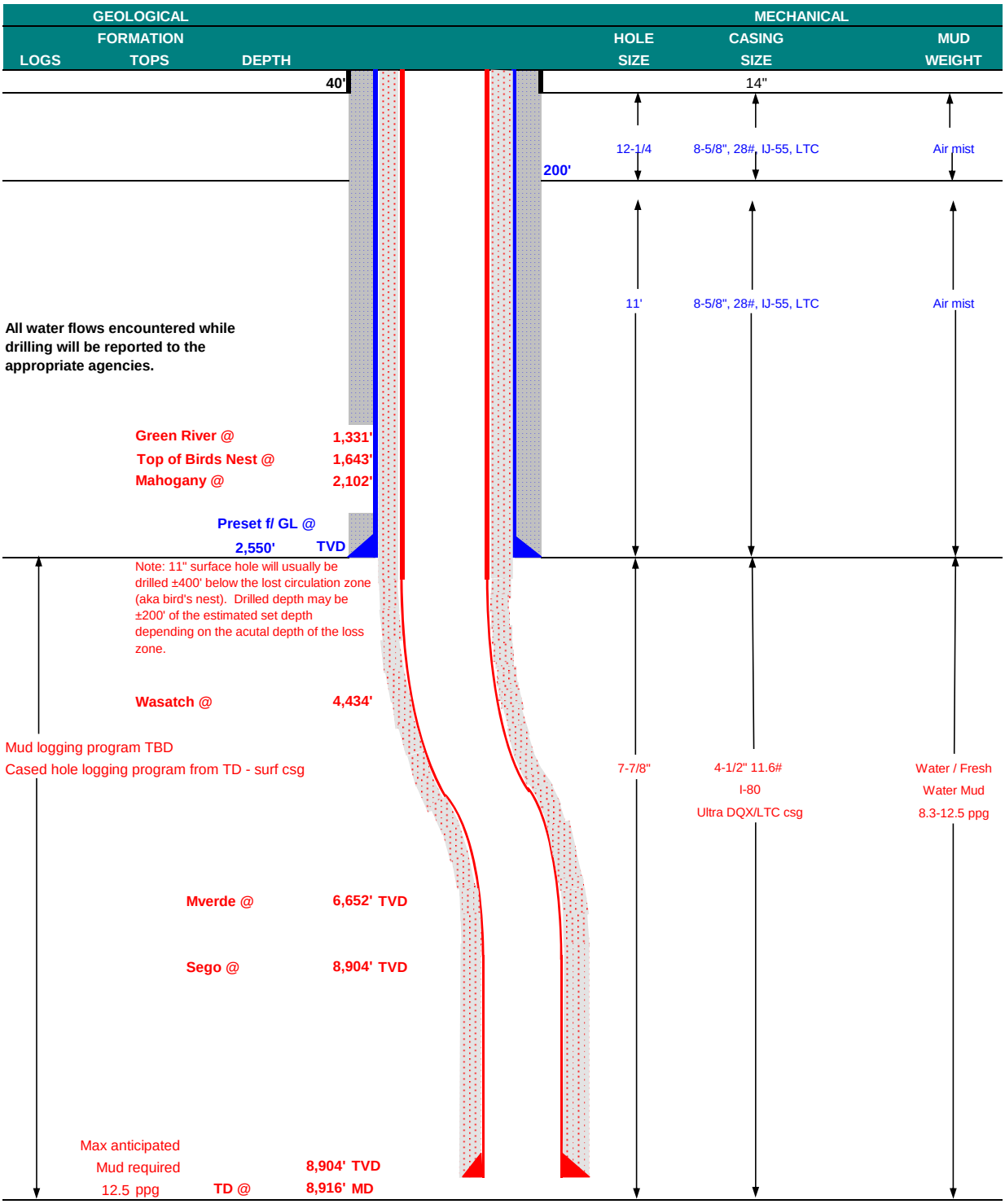
Please refer to the attached Drilling Program.

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP				DATE	March 12, 2012	
WELL NAME	**NBU 922-36D4CS**				TD	8,904' TVD	8,916' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	5,087'
SURFACE LOCATION	NWNW	1064 FNL	990 FWL	Sec 36	T 9S	R 22E	
	Latitude:	39.996896	Longitude:	-109.393515		NAD 27	
BTM HOLE LOCATION	NWNW	1241 FNL	825 FWL	Sec 36	T 9S	R 22E	
	Latitude:	39.996413	Longitude:	-109.394105		NAD 27	
OBJECTIVE ZONE(S)	Wasatch/Mesaverde						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.						



KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	LTC	DQX TENSION
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,550	28.00	IJ-55	LTC	2.12	1.58	5.57	N/A
								7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.10		3.19
	4-1/2"	5,000	to	8,916'	11.60	I-80	LTC	1.11	1.10	6.07	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
Option 1			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized						
Option 2	LEAD	2,050'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	3,926'	Premium Lite II +0.25 pps	310	35%	12.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	4,990'	50/50 Poz/G + 10% salt + 2% gel	1,180	35%	14.30		1.31
			+ 0.1% R-3					

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

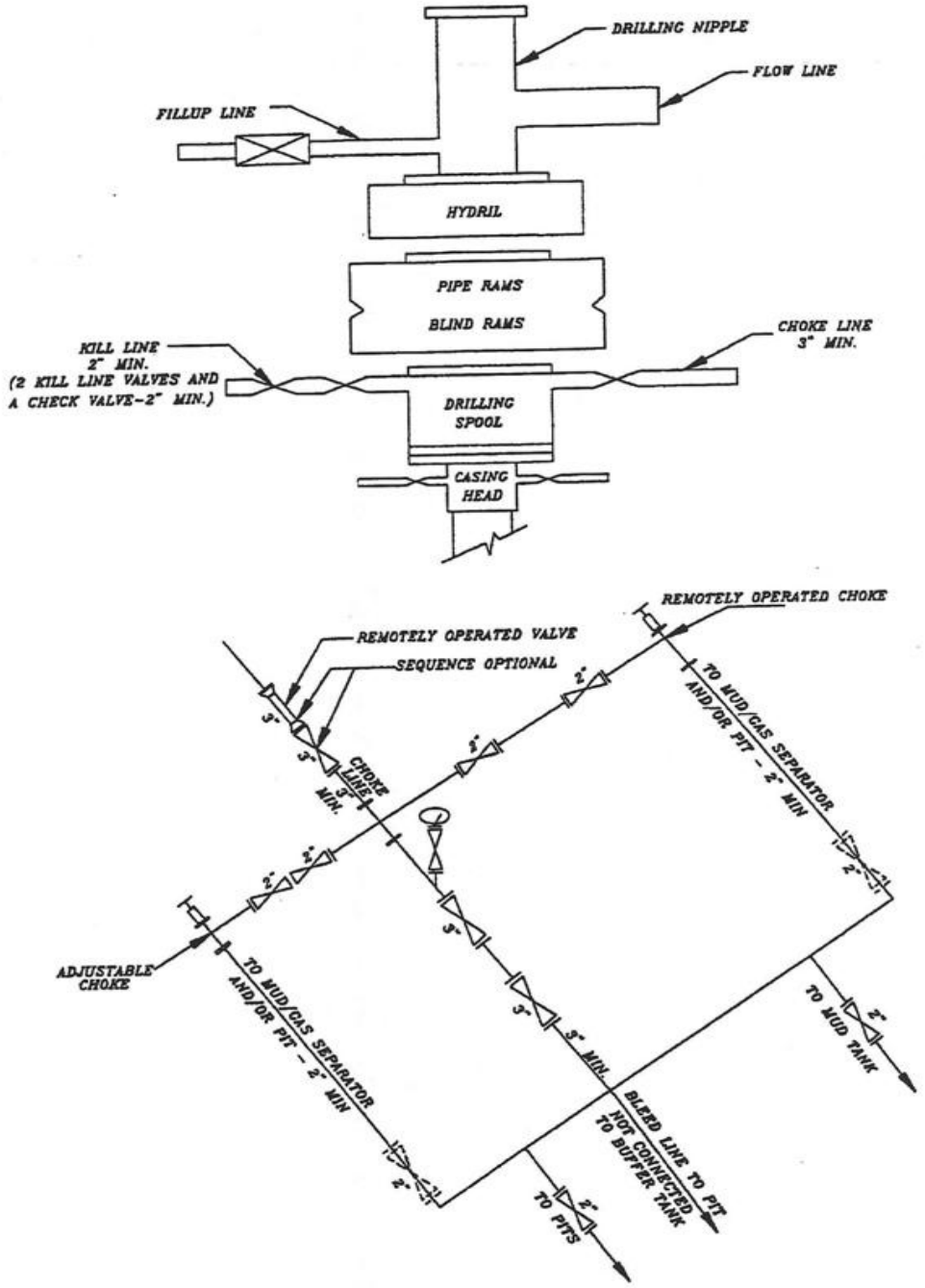
DRILLING ENGINEER: _____ **DATE:** _____

Nick Spence / Danny Showers / Chad Loesel

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

EXHIBIT A
NBU 922-36D4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

RECEIVED: Mar. 12, 2012

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

RECEIVED: Mar. 12, 2012

State of Utah - Notification Form

Operator Anadarko Petroleum Rig Name/# Ensign 138
Submitted By DALTON KING Phone Number 435- 828-0982
Well Name/Number NBU 922-36D4CS
Qtr/Qtr NW/NW Section 36 Township 9S Range 22E
Lease Serial Number ML-22650
API Number 43-047-51619

Casing – Time casing run starts, not cementing times.

☒ Production Casing
☐ Other

Date/Time 4/15/2012 14:00 AM ☐ PM ☒

BOPE

☐ Initial BOPE test at surface casing point
☐ Other

Date/Time AM ☐ PM ☐

RECEIVED
APR 17 2012
DIV. OF OIL, GAS & MINING

Rig Move
Location To: NBU 922-36E1BS

Date/Time 4/16/2012 06:00 AM ☒ PM ☐

Remarks TIME IS ESTIMATED

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 922-36D4CS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047516190000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6526

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1064 FNL 0990 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 4/17/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

MIRU ROTARY RIG. FINISHED DRILLING FROM 2591' TO 8916' ON 4/14/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED ENSIGN 138 RIG ON 4/17/2012 @ 10:30 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
May 08, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE N/A		**DATE** 4/17/2012

RECEIVED: Apr. 17, 2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5.LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: NBU 922-36D4CS

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047516190000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6526

9. FIELD and POOL or WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1064 FNL 0990 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 36 Township: 09.0S Range: 22.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 5/29/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	✓ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON MAY 29, 2012 AT 1845 HOURS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
June 13, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jenn Hawkins	720 929-6247	Staff Operations Specialist III
SIGNATURE N/A		**DATE** 6/6/2012

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: ML-22650

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ DRY ☐ OTHER

7. UNIT or CA AGREEMENT NAME: UTU63047A

b. TYPE OF WORK: NEW WELL ☑ HORIZ. LATS. ☐ DEEP-EN ☐ RE-ENTRY ☐ DIFF. RESVR. ☐ OTHER

8. WELL NAME and NUMBER: NBU 922-36D4CS

2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 4304751619

3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217

PHONE NUMBER: (720) 929-6000

10 FIELD AND POOL, OR WILDCAT: NATURAL BUTTES

4. LOCATION OF WELL (FOOTAGES)

AT SURFACE: NWNW 1064 FNL 990 FWL S36,T9S,R22E

AT TOP PRODUCING INTERVAL REPORTED BELOW: NWNW 1237 FNL 823 FWL S36,T9S,R22E

AT TOTAL DEPTH: NWNW 1258 FNL 824 FWL S36,T9S,R22E BHL by HSM

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWNW 36 9S 22E S

12. COUNTY: UINTAH

13. STATE: UTAH

14. DATE SPUDDED: 2/20/2012

15. DATE T.D. REACHED: 4/14/2012

16. DATE COMPLETED: 5/29/2012 ABANDONED ☐ READY TO PRODUCE ☑

17. ELEVATIONS (DF, RKB, RT, GL): 5087 GL

18. TOTAL DEPTH: MD 8,916 TVD 8,901

19. PLUG BACK T.D.: MD 8,850 TVD 8,835

20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)

HDIL/ZDL/CNGR-CBL/GR/CCL

23.
WAS WELL CORED? NO ☑ YES ☐ (Submit analysis)
WAS DST RUN? NO ☑ YES ☐ (Submit report)
DIRECTIONAL SURVEY? NO ☐ YES ☑ (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,606		675		0	
7 7/8"	4 1/2" I-80	11.6#	0	8,893		1,542		1120	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,322							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) MESAVERDE	7,101	8,832		
(B)				
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
7,101 8,832	0.36	150	Open ☑ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐
			Open ☐ Squeezed ☐

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
7101-8832	PUMP 6,941 BBLS SLICK H2O & 154,889 LBS 30/50 OTTAWA SAND
	7 STAGES

29. ENCLOSED ATTACHMENTS:

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT ☑ DIRECTIONAL SURVEY
☐ SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER:

30. WELL STATUS: PROD

RECEIVED
JUL 25 2012
DIV. OF OIL, GAS & MINING

(5/2000) **(CONTINUED ON BACK)**

31. INITIAL PRODUCTION — **INTERVAL A (As shown in item #26)**

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
5/29/2012	6/4/2012	24		0	3,180	430	

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:
14/64	3,115	3,887					0	3,180	430	PROD

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:

CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.

34. FORMATION (Log) MARKERS:

Name	Top (Measured Depth)
GREEN RIVER	1,330
BIRD'S NEST	1,639
MAHOGANY	2,004
WASATCH	4,478
MESAVERDE	6,640

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 ¼" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 4995'; LTC csg was run from 4995' to 8893'. Attached is the chronological well history, perforation report & final survey.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) CARA MAHLER TITLE REGULATORY ANALYST

SIGNATURE DATE 7/16/2012

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

(5/2000)

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW		Spud Date: 2/26/2012	
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: PROPETRO 11/11, ENSIGN 138/138
Event: DRILLING	Start Date: 11/22/2011		End Date: 4/16/2012
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/26/2012	9:13 - 16:00	6.78	MIRU	01	B	P		RIG MOVE TO NBU 922-36D4CS (WELL 3 0F 4) INSTALL DIVERTOR HEAD AND BLUEY LINE. BUILD DITCH. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP PUMP. PRIME PUMP. INSPECT RIG. HELD PRE-SPUD SAFETY MEETING.
	16:00 - 16:30	0.50	DRLSUR	02	D	P		PICK UP #1 BHA, TRIP IN HOLE, SPUD 12.25 HOLE
	16:30 - 18:00	1.50	DRLSUR	06	A	P		DRILL 12.25" 44' - 210', TRIP OUT OF HOLE, PICK UP 11" BIT AND DIRECTIONAL TOOLS, TRIP IN HOLE T/ 210'
	18:00 - 0:00		DRLSUR	02	D	P		DRILL F/210- T/760' (550' @ 84.6' ROP WOB 20K, RPM 45 UP/DWN/ROT 50/45/48 PSI ON/OFF 1200/1000 M.W. 8.4#, 2.7' LOW 0.20' RIGHT OF TARGET
2/27/2012	0:00 - 6:30	6.50	DRLSUR	02	D	P		DRILL F/760' - T/1570' (810' @ 124.6' ROP) WOB 20K, RPM 40 UP/DWN/ROT 73/54/61 PSI ON/ OFF 1300/1100 M. W. 8.4#
	6:30 - 7:30	1.00	DRLSUR	22	L	X		WEATHERFORD MWD COMPUTER FAILURE
	7:30 - 17:30	10.00	DRLSUR	02	D	P		DRILL F/1570' - 2591' (1021' @ 102.1 ROP) WOB 20K PSI ON/OFF 1650/1400 M.W. 8.4 UP/DWN/ROT 91/75/80 5' HIGH .8 LEFT OF TARGET
	17:30 - 19:30	2.00	DRLSUR	05	D	P		CIRCULATE FOR TRIP OUT
	19:30 - 23:30	4.00	DRLSUR	06	D	P		TRIP OUT OF HOLE LAYING DOWN DRILL STRING & BOTTOM HOLE ASSEMBLY
	23:30 - 0:00	0.50	DRLSUR	01	B	P		RIG UP TO RUN CASING
2/28/2012	0:00 - 2:30	2.50	DRLSUR	12	C	P		RUN 59 JTS 8 5/8, 28# CSNG. SHOE SET @ 2613.8', BAFFLE SET @ 2569.8'
	2:30 - 3:30	1.00	DRLSUR	12	B	P		HOLD SAFETY MEETING, RUN 200' OF 1". RIG DOWN RIG MOVE OFF WELL, REBUILD DITCH. RIG UP CEMENT TRUCK, 2" HARD LINES,. CEMENT HEAD, LOAD PLUG.
	3:30 - 5:00	1.50	DRLSUR	12	E	P		PRESSURE TEST LINES TO 2000 PSI. PUMP 150 BBLS OF WATER AHEAD. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. PUMP (300 SX) 61.35 BBLS OF 15.8# 1.15 YD 5 GAL/SK PREMIUM CEMENT W/ 2% CALC. DROP PLUG ON FLY. DISPLACE W/ 156.4 BBLS OF H20. NO CIRC THROUGH OUT. FINAL LIFT OF 220 PSI AT 8 BBL/MIN. BUMP PLUG W/470 PSI HELD FOR 5 MIN. FLOAT HELD. PUMP (150 SX) 30.64 BBLS OF SAME TAIL CEMENT W/ 4% CALC. DOWN BACK SIDE. SHUT DOWN AND CLEAN TRUCK. NO CEMENT TO SURFACE.
	5:00 - 7:30	2.50	DRLSUR	13	A	P		WOC , PUMP (225 SX) 15.8 CMT DOWN BACKSIDE. 4 BBLS TO SURFACE, RELEASE RIG @ 07:30
4/10/2012	8:00 - 8:30	0.50	MIRU	01	B	P		RIG DOWN ROTARY TOOLS ,SKID RIG , RIG UP ROTARY TOOLS
	8:30 - 9:00	0.50	MIRU	14	A	P		NIPPLE UP BOP, FUNCTION TEST
	9:00 - 10:00	1.00	MIRU	09	A	P		CUT & SLIP 114' DRILL LINE

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW			Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: PROPETRO 11/11, ENSIGN 138/138
Event: DRILLING	Start Date: 11/22/2011		End Date: 4/16/2012
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:00 - 14:00	4.00	PRPSPD	15	A	P		SAFETY MEETING W/ A-1 TESTING, RIG UP & TEST FLOOR VALVES, TOP DRIVE VALVE, INSIDE & OUTSIDE KILL LINE VALVES, INSIDE CHOKE LINE VALVE , HCR VALVE, CHOKE MANIFOLD, PIPE & BLIND RAMS 250 PSI F/ 5 MIN , 5000 PSI F/ 10 MIN, ANNULAR 250 PSI F/ 5 MIN, 2500 PSI F/ 10 MIN, CASING TO 1500 PSI F/ 30 MIN, RIG DOWN TESTER
	14:00 - 14:30	0.50	PRPSPD	14	B	P		INSTALL WEAR BUSHING
	14:30 - 17:00	2.50	PRPSPD	06	A	P		PICK UP DRILFORMANCE DF 616TZ BIT, SDI .28 RPG/ 1.5 BEND MOTOR, ORIENT MWD, TIH
	17:00 - 18:00	1.00	DRLPRO	02	F	P		DRILL CEMENT & FLOAT EQUIP F/ 2470' TO 2601', 4' FLARE OUT OF SHOE
	18:00 - 0:00	6.00	DRLPRO	02	D	P		DRILL F/ 2601' TO 3588' , 987' @ 164.5' HR WOB 15/18 SPM 120, GPM 540 RPM 55/151 TRQ 9/5 PSI ON/OFF 1846/1388 PU/SO/RT 105/100/102 WT 8.5, VIS 28 SLIDE 140' IN 1.08 HRS = 129.23' HR ROT 847' IN 4.92 HRS = 183.3' HR NOV DEWATERING BIT POSITION @ 3527' 43.15 N , 31.04 W
4/11/2012	0:00 - 11:00	11.00	DRLPRO	02	D	P		DRILL F/ 3588' TO 5288', 1700' @ 154.5'/HR. WOB 16-20K PUMPS: 120 STOKES, 540 GPM RPM 55/151 TRQ 9/6 PSI ON/OFF 1950/1450 PU/SO/RT 145/130/138 DIRTY WATER WT 8.5, VIS 28 SLIDE: 54', 1HR. @ 54'/HR. ROT: 1646', 10HRS. @ 164.6'/HR. NOV DEWATERING PUMPING GEL/LCM SWEEPS BIT POSITION @ 8'N, 11.77'W OF CENTER
	11:00 - 11:30	0.50	MAINT	07	A	P		RIG SERVICE
	11:30 - 23:00	11.50	DRLPRO	02	D	P		DRILL F/ 5288' TO 6424', 1136' @ 98.78'/HR. WOB 16-20K PUMPS: 120 STOKES, 540 GPM RPM 55/151 TRQ 10/8 PSI ON/OFF 1940/1600 PU/SO/RT 150/132/142 DIRTY WATER WT 8.5, VIS 28 SLIDE: 60', 1.09HR. @ 55'/HR. ROT: 1076', 10.41HRS. @ 103.4'/HR. NOV DEWATERING PUMPING GEL/LCM SWEEPS BIT POSITION @ 17.47'N, 9.72'W OF CENTER
	23:00 - 23:30	0.50	MAINT	07	A	P		RIG SERVICE, SERVICE THE TOP DRIVE

Operation Summary Report

Well: NBU 922-36D4CS YELLOW			Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: PROPETRO 11/11, ENSIGN 138/138
Event: DRILLING	Start Date: 11/22/2011		End Date: 4/16/2012
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	23:30 - 23:30	0.00	DRLPRO	02	D	P		DRILL F/ 6424' TO 6486', 62' @ 124'/HR. WOB 16-20K PUMPS: 120 STOKES, 540 GPM RPM 55/151 TRQ 10/8 PSI ON/OFF 1940/1600 PU/SO/RT 150/132/142 DIRTY WATER WT 8.5, VIS 28 SLIDE: ROT: 62', .5 HR. @ 124'/HR. NOV DEWATERING PUMPING GEL/LCM SWEEPS BIT POSITION @ 17.47'N, 9.72'W OF CENTER
4/12/2012	0:00 - 9:30	9.50	DRLPRC	02	D	P		DRILL F/ 6486'- 7368', 882' @ 92.8 '/HR. WOB 16-20K PUMPS: 120 STOKES, 540 GPM RPM 50/151 TRQ 11/9 PSI ON/OFF 1940/1600 PU/SO/RT 170/145/158 DIRTY WATER WT 8.5, VIS 28 SLIDE: 70', 2 HR.S @ 35'/HR. ROT: 812', 7.5 HR. @ 108.3'/HR. NOV DEWATERING STOPPED DEWATERING AND WENT CONVENTIONAL @ 6800' STARTED PRE-TREATING THE WATER FOR MUD UP @ 7000' PUMPING GEL/LCM SWEEPS BIT POSITION @ 1'S, 1.2'W OF CENTER APPROX SEEPAGE 200 BBL.
	9:30 - 10:00	0.50	MAINT	07	A	P		RIG SERVICE
	10:00 - 18:30	8.50	DRLPRC	02	D	P		DRILL F/ 7368'-7925', 557' @ 92.8 '/HR. WOB 16-20K PUMPS: 110 STOKES, 496 GPM RPM 50/139 TRQ 12/9 PSI ON/OFF 1940/1600 PU/SO/RT 175/156/166 MUD: 37/VIS 10.5/MW SLIDE: 40', 1 HR.S @ 40'/HR. ROT: 517', 7.5 HR. @ 68.9'/HR. NOV RUNNING CONVENTIONAL STARTED MUD UP AT 7450' PUMPING LCM SWEEPS LOST APPOX. 110 BBL. BIT POSITION @ 3.66'S, 4.72'W OF CENTER I RECIEVED PERMISSION TO RAISE THE MUD WEIGHT TO 10.5 PPG FROM KENNY G. TO HELP WITH SPLINTERING AND SLOUGHING SHALE. WE ALSO RECIEVED PERMISSION VIA KENNY FROM ENGINEERING TO GO TO 140 SCREENS AS THE MUD STORED IN THE URIGHTS HAD FINE GROUND LCM IN THEM AND IT WAS BLINDING OFF OUR SHAKERS.
	18:30 - 19:00	0.50	MAINT	07	A	P		RIG SERVICE AND CHANGE OUT SHAKER SCREENS

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW		Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD	Rig Name No: PROPETRO 11/11, ENSIGN 138/138
Event: DRILLING	Start Date: 11/22/2011	End Date: 4/16/2012
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	19:00 - 0:00	5.00	DRLPRC	02	D	P		DRILL F/ 7925'-8097', 172' @ 34.4'/HR. WOB 16-20K PUMPS: 110 STOKES, 450 GPM RPM 50/126 TRQ 12/9 PSI ON/OFF 1940/1600 PU/SO/RT 175/156/166 MUD: 37/VIS 10.5/MW SLIDE: ROT: 172', 5 HR. @ 34.4'/HR. NOV RUNNING CONVENTIONAL PUMPING LCM SWEEPS LOST APPOX. 30 BBL. BIT POSITION @ 7.55'S, 9.31'W OF CENTER WE HAD SEVERAL PRESSURE SPIKES IN THE MESA VERDE, WE LOWERED OF THE BIT WEIGHT TO GET THROUGH THE ASSUMED FRACTURES. WE GOT IT SMOOTH OUT FOR A WHILE BUT THE ROP WAS STILL SLOWER AFTER THE INITIAL PRESSURE SPIKES.
4/13/2012	0:00 - 2:00	2.00	DRLPRC	02	D	P		DRILL F/ 8097'- 8125' , 28' @ 14'/HR. WOB 16-20K PUMPS: 100 STOKES, 450 GPM RPM 50/126 TRQ 14/10 PSI ON/OFF 1940/1600 PU/SO/RT 175/156/166 MUD: 37/VIS 10.5/MW SLIDE: ROT: 28', 2 HR. @ 14'/HR. WE HAD A GRADUAL PRESSURE LOSS AND SLOW ROP, I CALLED KENNEY G. AND GOT PERMISSION TO PULL THE BIT. NOV RUNNING CONVENTIONAL PUMPING LCM SWEEPS LOST APPOX. 30 BBL. BIT POSITION @ 7.55'S, 9.31'W OF CENTER
	2:00 - 2:30	0.50	DRLPRC	05	C	P		CIRCULATE AND BUILD A WEIGHTED PILL FOR THE TRIP.
	2:30 - 10:30	8.00	DRLPRC	06	A	P		WE PUMPED THE 1ST 3 STANDS OFF BOTTOM TRIPPED OUT OF THE HOLE FOR A BIT AND MUD MOTOR. WE HAD TO BACKREAM OUT FROM 4850' TO 4550' BECAUSE OF SLOUGHING SHALE.. WE CHANGED OUT THE MOTOR TO A .14 RPG WITH A 1.5 DEG,. BEND. THE BIT HAD A WASHED OUT JET.
	10:30 - 16:00	5.50	DRLPRC	06	A	P		WE TRIPPED BACK IN THE HOLE WITH THE NEW BHA . WE BROKE CIRCULATION @ 2600', 4000' & 6000'. WE HAD TO WASH THROUGH A BRIDGE @ 4435'. WE REAMED THE LAST 2 STANDS DOWN AND HAD 20' OF FILL ON BOTTOM WE LOST 80 BBL. OF MUD ON THE TRIP

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW			Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: PROPETRO 11/11, ENSIGN 138/138
Event: DRILLING	Start Date: 11/22/2011		End Date: 4/16/2012
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	16:00 - 21:00	5.00	DRLPRC	02	D	P		DRILL F/ 8125'- 8340', 215' @ 43'/HR. WOB 16-20K PUMPS: 100 STOKES, 450 GPM RPM 50/126 TRQ 12/9 PSI ON/OFF 1940/1600 PU/SO/RT 175/156/166 MUD: 40/VIS 10.9/MW THE MUD WT WAS HIGHER AS THE WEIGHTED PILL FOR THE TRIP WAS IN THE SYSTEM SLIDE:45', 2.17 HR. @ 20.7'/HR. ROT: 170', 2.83 HR. @ 60.1'/HR. PUMPING LCM SWEEPS LOST APPOX. 30 BBL. BIT POSITION @ 10.48'S, 9.03'W OF CENTER LOST APP. 40 BBL. OF MUD
	21:00 - 23:00	2.00	SUSPEN	22	N	X		WE TOOK A 18 BBL. KICK, WE SHUT THE WELL IN. WE HAD 50# OF SIDDP/ 0# SICP. WE DISPLACED THE HOLE WITH 11.3# MUD @ 60 SPM THROUGH THE CHOKE AND HAD A 12' FLARE FROM THE BOTTOMS UP UNTIL IT WE HAD KILL WT. MUD TO SURFACE. WE TRANFERED THE FINAL HEAVY MUD FROM THE UPRIGHTS TRANSFERED 350 BBL. OF LIGHT MUD TO THE UPRIGHTS TO BE USED FOR MAKEUP DURING THE PROCESS.
	23:00 - 0:00	1.00	DRLPRC	02	D	P		DRILL F/ 8340'- 8410', 70' @ 70'/HR. WOB 18-20K PUMPS: 100 STOKES, 450 GPM RPM 50/63 TRQ 14/10 PSI ON/OFF 2290/1960 PU/SO/RT 180/155/166 MUD: 40/VIS 11.4/MW SLIDE: ROT: 70', 2 HR. @ 70'/HR. PUMPING LCM SWEEPS LOST APPOX. 30 BBL. BIT POSITION @ 11.84'S, 8.83'W OF CENTER WE HAD A 4-12' FLARE WHILE DRILLING
4/14/2012	0:00 - 11:00	11.00	DRLPRC	02	D	P		DRILL F/ 8410'-8916', 506' @ 46'/HR. WOB 18-20K PUMPS: 100 STOKES, 450 GPM RPM 50/63 TRQ 14/10 PSI ON/OFF 2340/2040 PU/SO/RT 189/168/177 MUD: 40/VIS 11.4+/MW SLIDE: 92', 4.16 HRS @ 22.1'/HR. ROT: 414', 6.84 HR. @ 60.5'/HR. PUMPING LCM SWEEPS LOST APPOX. 220 BBL. BIT POSITION 18.40'S & 2.34'W OF CENTER WE HAD A 4-12' FLARE WHILE DRILLING
	11:00 - 11:30	0.50	MAINT	07	A	P		RIG SERVICE

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW			Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: PROPETRO 11/11, ENSIGN 138/138
Event: DRILLING	Start Date: 11/22/2011		End Date: 4/16/2012
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	11:30 - 13:00	1.50	DRLPRC	05	C	P		CIRCULATE AND CONDITION THE MUD FOR A WIPER TRIP WE HAD AN INTERMITTENT 3-6' FLARE WE RAISED THE VIS TO 11.6PUMPED A 2# OVER WEIGHTED PILL
	13:00 - 20:00	7.00	DRLPRC	06	E	P		WE PUMPED 2 STANDS OFF BOTTOM MADE A 67 STAND WIPER TRIP TO THE CASING SHOE. ONE SMALL SPOT THAT DRUG 30K OVER PULL @ 4500' TRIPPED BACK IN THE HOLE, FILLED AT THE SHOE, 400' & 6000'
	20:00 - 20:30	0.50	DRLPRC	05	C	P		CIRCULATED AND WASHED THE LAST 2 STANDS IN THE HOLE. WE HAD A 4-12' FLARE SOON AFTER REGAINING FLOW.
	20:30 - 0:00	3.50	SUSPEN	22	N	X		WE TOOK A 60 BBL. GAIN, SHUT THE WELL IN. WE HAD 66# SIDPP AND 40# SICP WITH 11.8+ MUD WEIGHT. KENNY GATHINGS WAS NOTIFIED BY PHONE OF OUR OPERATION. WE CIRCULATED AROUND 12.1PPG MUD AND CIRCULATED THE GAS OUT THROUGH THE CHOKE. WE DID A FLOW CHECK & PULLED THE WELL OFF OF THE CHOKE AS SOON AS WE HAD THE GAS OUT AND THE 12.1 MUD TO SURFACE. AND STARTED TO CIRCULATE ONCE AGAIN FOR ABOUT 30 MIN AND TOOK A 40 BBL. GAIN. THE PUSHER SHUT DOWN THE PUMPS AND HAD SIGNIFICANT FLOW SO HE SHUT THE WELL BACK IN AND WENT BACK TO THE CHOKE. HE HAD 58# SIDPP AND 220# SICP. tHE MUD WAS COMING BACK W/ BETTER THAN A POUND GAS CUT (10.8). WE BEGAN CIRCULATING AND RAISING THE MUD WEIGHT TO 12.3. WE STOPPED 2 TIMES WHILE RAISING IT SLOWLY TO 12.3 FOR FLOW CHECKS AND IT WAS FLOWING
4/15/2012	0:00 - 2:30	2.50	SUSPEN	22	N	X		STARTED TO CIRCULATE ONCE AGAIN FOR ABOUT 30 MIN AND TOOK A 40 BBL. GAIN. THE PUSHER SHUT DOWN THE PUMPS AND HAD SIGNIFICANT FLOW SO HE SHUT THE WELL BACK IN AND WENT BACK TO THE CHOKE. WE HAD 58# SIDPP AND 220# SICP. THE MUD WAS COMING BACK W/ BETTER THAN A POUND GAS CUT (10.8). WE BEGAN CIRCULATING AND RAISING THE MUD WEIGHT TO 12.3. WE STOPPED 2 TIMES WHILE RAISING IT SLOWLY TO 12.3 FOR FLOW CHECKS AND IT WAS FLOWING. WE WERE NOT GETTING GAS OR GAS CUT ANYMORE SO WE STOPPED THE PUMPS AND WATCHED THE FLOW SINCE IT SEEMED TO BE A BALLOONING ISSUE. THE FLOW DID FINALY SLOW DOWN AFTER ABOUT 15 - 20 MINUTES.
	2:30 - 3:30	1.00	DRLPRC	05	C	P		WE CIRCULATED OFF THE CHOKE AT FULL RATE FOR A BOTTOMS UP
	3:30 - 10:30	7.00	DRLPRC	06	A	P		WE PUMPED 3 STANDS OFF BOTTOM, PULLED 20 STANDS, STOPPED TO DOUBLE CHECK FOR FLOW. TRIPPED OUT OF THE HOLE FOR LOGS, LAYED DOWN THE MUD MOTOR AND MWD TOOL.
	10:30 - 11:00	0.50	DRLPRC	14	B	P		PULLED THE WEAR BUSHING

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW			Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: PROPETRO 11/11, ENSIGN 138/138
Event: DRILLING	Start Date: 11/22/2011		End Date: 4/16/2012
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	11:00 - 16:30	5.50	EVALPR	11	D	P		SPOTTED IN BAKER ATLAS, HELD A PRE JOB SAFETY MEETING. RIGGED UP BAKER ATLAS AND RAN IN TO LOG. DRILLERS TD 8916' THE LOGS BRIDGED OUT @ 6470'. I CALLED KENNY G. AND CHAD LOESEL CHAD SAID TO MAKE ONE ATTEMPT SLICK. THE 2ND ATTEMPT ALSO BRIDGED OFF @ 6470'.I CALLED CHAD AND WAS ADVISED TO PULL THE LOGGING TOOL AND RUN CASING.
	16:30 - 0:00	7.50	CSGPRO	12	C	P		WE HELD A SAFETY MEETING WITH FRANK'S WESTATE , RIGGED UP THE CASING CREW AND RAN 211 TOTAL JOINTS, (93 JTS. OF 4.5"/I-80 / 11.6# / LTC), (118 JTS. OF 4.5" / 11.6# / I-80 / DQX). LANDED AT 8893.36, FLOAT COLLAR @ 8848.13, MV MARKER @ 6552.9, DQX CROSS OVER @ 4975.42`. CHECKED FLOAT EQUIPMENT @ SURFACE FILLED THE PIPE @ 2700' / 4000' / 6000' / 7500' WITNESSED BY TUBULAR SOLUTIONS PRESENTLY AT 6000' WITH THE CASING RUN
4/16/2012	0:00 - 3:30	3.50	CSGPRO	12	C	P		FINISHED THE CASING RUN. RAN 211 TOTAL JOINTS, (93 JTS. OF 4.5"/I-80 / 11.6# / LTC), (118 JTS. OF 4.5" / 11.6# / I-80 / DQX). LANDED AT 8893.36, FLOAT COLLAR @ 88848.13, MV MARKER @ 6552.9, DQX CROSS OVER @ 4975.42`. CHECKED FLOAT EQUIPMENT @ SURFACE FILLED THE PIPE @ 2700' / 4000' / 6000' / 7500' IT TOOK 10K TO GET THROUGH THE BRIDGE @ 6470'
	3:30 - 5:00	1.50	CSGPRO	05	D	P		CIRCULATED W 70 STROKES / 315 GPM / 560PSI. 12.3/MW, 42/VIS. WE HAD A 15' FLARE FOR 60 MIN
	5:00 - 8:30	3.50	CSGPRO	12	E	P		DROPPED BOTTOM PLUG, PUMPED 5 BBL 8.4 WATER SPACER, 40 BBL. OF SEAL BOND SPACER ,542 SX PREMIUM LITE II CEMENT + 0.5 LBS/SX STATIC FREE + 0.15% BWOC R-3 + 0.25 LBS/SX CELLO FLAKE + 5 LBS/SX KOL SEAL + 0.4% BWOC SODIUM METASILICATE + 6% BWOC BENTONITE II +.4 BWOC FL-52 + 84.9% FRESH WATER 13.0#, 1.77 YIELD LEAD CEMENT , 1000 SX 50:50 POZ (ASH FLY) CLASS G + 10% BWOW SODIUM CHLORIDE + 0.2% BWOC R-3 + .5% BWOC EC-1 + 0.002 GPS FP-6L + 2% BENTONITE II + 58.9% FRESH WATER, DROPPED THE TOP PLUG, DISPLACE W/ 138 BBLS CLAYCARE + 1 GAL MAGNACIDE @ 8.34 PPG WATER ,LOST RETURNS @ 85 BBL. INTO THE DISPLACEMENT WITH 13 BBL. OF SEAL BOND RETURNED TO THE PIT. SLOWED THE PUMP RATE TO 2.5 BBL/MIN., FINAL LIFT 2578 PSI, BUMPED BLUG @ 2988 PSI , FLOATS HELD,1.5 BBL. WATER BACK TO THE TRUCK, 13 BBLS OF SEAL BOND BACK TO PIT , TOP OF TAIL EST @ 3934 ' ,TOP OF LEAD 600' , FLUSH STACK, R/D CEMENTERS
	8:30 - 9:00	0.50	CSGPRO	14	B	P		SET 90K WEIGHT ON SLIPS, NIPPLE DOWN AND CUT OFF THE CASING

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW			Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: PROPETRO 11/11, ENSIGN 138/138
Event: DRILLING	Start Date: 11/22/2011		End Date: 4/16/2012
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	9:00 - 10:30	1.50	RDMO	01	E	P		PREPPED THE RIG TO SKID RIG RELEASED @ 10:30

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	NBU 922-36D4CS YELLOW	**Wellbore No.**	OH
Well Name	NBU 922-36D4CS	**Wellbore Name**	NBU 922-36D4CS
Report No.	1	**Report Date**	5/11/2012
Project	UTAH-UINTAH	**Site**	NBU 922-36D PAD
Rig Name/No.		**Event**	COMPLETION
Start Date	5/11/2012	**End Date**	
Spud Date	2/26/2012	**Active Datum**	RKB @5,101.00usft (above Mean Sea Level)
UWI	NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

1.3 General

Contractor		**Job Method**		**Supervisor**	
Perforated Assembly		**Conveyed Method**			

1.4 Initial Conditions

Fluid Type		**Fluid Density**	
Surface Press		**Estimate Res Press**	
TVD Fluid Top		**Fluid Head**	
Hydrostatic Press		**Press Difference**	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	7,101.0 (usft)-8,832.0 (usft	**Start Date/Time**	5/15/2012 12:00AM
No. of Intervals	33	**End Date/Time**	5/15/2012 12:00AM
Total Shots	150	**Net Perforation Interval**	48.00 (usft)
Avg Shot Density	3.13 (shot/ft)	**Final Surface Pressure**	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/15/2012 12:00AM	MESAVERDE/			7,101.0	7,102.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

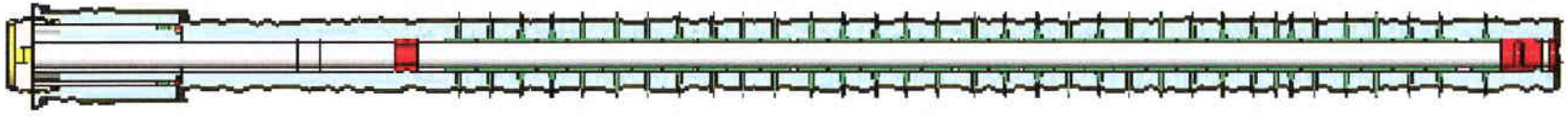
Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/15/2012 12:00AM	MESAVERDE/			7,146.0	7,147.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,160.0	7,161.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,206.0	7,208.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,234.0	7,236.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,322.0	7,323.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,358.0	7,359.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,394.0	7,395.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,488.0	7,489.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,501.0	7,502.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,544.0	7,546.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,688.0	7,689.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,740.0	7,741.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,790.0	7,792.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,810.0	7,811.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,850.0	7,852.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			7,992.0	7,993.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,027.0	8,028.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,107.0	8,108.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,136.0	8,138.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,162.0	8,163.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,178.0	8,179.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-TS (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
5/15/2012 12:00AM	MESAVERDE/			8,226.0	8,227.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,256.0	8,257.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,284.0	8,285.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,303.0	8,305.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,326.0	8,328.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,358.0	8,359.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,386.0	8,387.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,403.0	8,404.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,473.0	8,475.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,498.0	8,500.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
5/15/2012 12:00AM	MESAVERDE/			8,826.0	8,832.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	

3 Plots

3.1 Wellbore Schematic



US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW		Spud Date: 2/26/2012	
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1
Event: COMPLETION	Start Date: 5/11/2012		End Date:
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/11/2012	7:00 - 8:00	1.00	COMP	33		P		RU HOT OILER, SLIGHT DRIP FROM SURFACE PRESSURED TO 1200 PSI, PRIMARY PACKING LEAKING AROUND 4 1/2" CSG, BLED DOWN TO 750 PSI & HELD, BLED WELL DOWN MOVED TO NEXT WELL
5/12/2012	-							
5/18/2012	7:00 - 7:15	0.25	COMP	48		P		HSM & JSA W/B & C QUICK TEST.
	10:00 - 11:00	1.00	COMP	37	B	P		MIRU CASEDHOLE SOLUATIONS PERF STG 1) P/U 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 90 DEG PHSG. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. SWI – SDFWE.
	12:00 - 13:22	1.37	COMP	33	C	P		SURFACE CSG 132 PSI. WHP 0 PSI. FILL PRODUCTION CSG. MIRU B & C QUICK TEST. PSI TEST T/ 1012 PSI. HELD FOR 15 MIN LOST 12 PSI. PSI TEST T/ 3543 PSI. HELD FOR 15 MIN LOST 31 PSI. 1ST PSI TEST T/ 7037 PSI. HELD FOR 30 MIN LOST 69 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. RDMO TESTERS. SWIFN
5/21/2012	6:45 - 7:00	0.25	COMP	48		P		HSM & JSA W/SUPERIOR WELL SERVICE & CASEDHOLE SOLUATIONS
	7:39 - 8:00	0.35	COMP	36	E	P		MIRU SUPERIOR WELL SERVICES. PT SURFACE EQUIPMENT TO 8039 PSI & HOLD 8 MIN. LOST 100 PSI. FRAC STG 1) WHP 946 PSI. BRK DWN PERF 4.2 BPM @ 3720 PSI. ISIP 2507 PSI. FG. 0.72. EST INJ RATE 51.2 BPM @ 5364 PSI. 23/24 PERFS OPEN - 94%. MP 5414 PSI, MR 51.7 BPM, AP 5154 PSI, AR 50.3 BPM. ISIP 2774 PSI, FG. 0.75, NPI 267 PSI. PMP'D 745 BBLS SLK WTR, 10,905 LBS 30/50 SND. X-OVER FOR WL.
	8:00 - 9:00	1.00	COMP	37	B	P		PERF STG 2) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 8530'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC
	9:08 - 9:27	0.32	COMP	36	E	P		FRAC STG 2) WHP 709 PSI. BRK DWN PERF 4.1 BPM @ 3240 PSI. ISIP 2388 PSI. FG. 0.72. EST INJ RATE 52.9 BPM @ 4586 PSI. 21/21 PERFS OPEN - 100%. MP 4861 PSI, MR 53.6 BPM, AP 4586 PSI, AR 53 BPM. ISIP 2456 PSI, FG. 0.73, NPI 68 PSI. PMP'D 818 BBLS SLK WTR, 18,650 LBS 30/50 SND. X-OVER FOR WL.

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW		Spud Date: 2/26/2012	
Project: UTAH-UINTAH	Site: NBU 922-36D PAD		Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1
Event: COMPLETION	Start Date: 5/11/2012		End Date:
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	9:27 - 10:27	1.00	COMP	37	B	P		PERF STG 3) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 8348'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC
	11:53 - 12:16	0.38	COMP	36	E	P		FRAC STG 3) WHP 2238 PSI. BRK DWN PERF 5.6 BPM @ 2951 PSI. ISIP 2350 PSI. FG. 0.72. EST INJ RATE 53.1 BPM @ 4561 PSI. 21/21 PERFS OPEN - 100%. MP 5077 PSI, MR 53.9 BPM, AP 4542 PSI, AR 53.3 BPM. ISIP 2623 PSI, FG. 0.76, NPI 273 PSI. PMP'D 921 BBLS SLK WTR, 20,250 LBS 30/50 SND. X-OVER FOR WL.
	12:21 - 13:21	1.00	COMP	37	B	P		PERF STG 4) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 8209'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC
	14:01 - 14:28	0.45	COMP	36	E	P		FRAC STG 4) WHP 1277 PSI. BRK DWN PERF 4.1 BPM @ 4081 PSI. ISIP 2335 PSI. FG. 0.73. EST INJ RATE 50.6 BPM @ 4701 PSI. 21/21 PERFS OPEN - 100%. MP 4741 PSI, MR 51.2 BPM, AP 4356 PSI, AR 50.8 BPM. ISIP 2411 PSI, FG. 0.74, NPI 76 PSI. PMP'D 1193 BBLS SLK WTR, 28,104 LBS 30/50 SND. X-OVER FOR WL.
	14:33 - 15:33	1.00	COMP	37	B	P		PERF STG 5) P/U HALCO 8K CBP & 3 1/8" EXP GNS, 23 GRM, 0.36 HOLE, 120 DEG PHSG. RIH SET CBP @ 7882'. PERF MESA VERDE AS PER PERF DESIGN. POOH & HANG BACK LUB. X-OVER FOR FRAC

Operation Summary Report

Well: NBU 922-36D4CS YELLOW		Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD	Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1
Event: COMPLETION	Start Date: 5/11/2012	End Date:
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/22/2012	7:00 - 18:00	11.00	COMP	36	B	P		FRAC STG 5)WHP 1476 PSI, BRK 2892 PSI @ 4.0 BPM. ISIP 1916 PSI, FG .69. CALC HOLES OPEN @ 51.1 BPM @ 4699 PSI = 100% HOLES OPEN. (21/21 HOLES OPEN) ISIP 2039 PSI, FG .70 NPI 123 PSI. MP 6201 PSI, MR 51.9 BPM, AP 4073 PSI, AR 51.4 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7576' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW FRAC STG 6)WHP 1772 PSI, BRK 2505 PSI @ 5.5 BPM. ISIP 2175 PSI, FG .69 CALC HOLES OPEN @ 51.8 BPM @ 4175 PSI = 100% HOLES OPEN. (21/21 HOLES OPEN) ISIP 2230 PSI, FG .27 NPI 223 PSI. MP 4279 PSI, MR 52.2 BPM, AP 3959 PSI, AR 51.8 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 7266' P/U PERF AS PER PERF DESIGN. POOH. X-OVER FOR FRAC CREW FRAC STG 7)WHP 419 PSI, BRK 2314 PSI @ 4.0 BPM. ISIP 1335 PSI, FG .62 CALC HOLES OPEN @ 53.8 BPM @ 3620 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2921 PSI, FG .85, NPI 1586 PSI. MP 4060 PSI, MR 54.0 BPM, AP 3737 PSI, AR 53.8 BPM PUMPED 30/50 OTTAWA SAND IN THIS STAGE X-OVER FOR W L PU 4 1/2 8K HAL CBP. RIH SET CBP @ 7,051'.POOH. RD FRAC & WL CREWS SWIFN TOTAL SAND= 154,889 # 30/50 OTTAWA TOTAL CLFL= 6,941 BBLS
5/29/2012	7:00 - 7:15	0.25	COMP	48		P		JSA-SAFETY MEETING
	7:15 - 9:30	2.25	COMP	30	A	P		MIRU SERVICE UNIT, N/D WH, N/U BOPS & TBG EQUIP.
	9:30 - 13:00	3.50	COMP	31	I	P		P/U 3 7/8" BIT AND POBS, RIH W/ 2 3/8" L-80 TBG, TALLY AND BROACH TBG IN, TAG SAND @

US ROCKIES REGION

Operation Summary Report

Well: NBU 922-36D4CS YELLOW		Spud Date: 2/26/2012
Project: UTAH-UINTAH	Site: NBU 922-36D PAD	Rig Name No: MILES-GRAY 1/1, MILES-GRAY 1/1
Event: COMPLETION	Start Date: 5/11/2012	End Date:
Active Datum: RKB @5,101.00usft (above Mean Sea Level)	UWI: NW/NW/0/9/S/22/E/36/0/0/26/PM/N/1064/W/0/990/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:00 - 18:30	5.50	COMP	44	C	P		R/U POWER SWIVEL, PRESSURE TEST BOPS AND CSG TO 3000#, OK, ESTB CIRC, (DRLG CBP #1) 7051 ', DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 500 # DIFF, RIH TAG @ 7235 ', C/O 30 ' SAND, FCP = 250#, (DRLG CBP # 2) 7265 ', DRILL OUT HALLIBURTON 8K CBP IN 5 MIN, 300# DIFF, RIH TAG @ 7551 ', C/O 30 ' SAND, FCP = 200 #, (DRLG CBP # 3) 7576 ', DRILL OUT HALLIBURTON 8K CBP IN 8 MIN, 300 # DIFF, RIH TAG @ 7862 ', C/O 20' SAND, FCP = 400 #, (DRLG CBP #4) 7882 ', DRILL OUT HALLIBURTON 8K CBP IN 8 MIN, 300 # DIFF, RIH TAG @ 8179 ', C/O 30 ' SAND, FCP = 450 #, (DRLG CBP #5) 8209 ', DRILL OUT HALLIBURTON 8K CBP IN 10 MIN, 400 # DIFF, RIH TAG @ 8335 ', C/O 28 ' SAND, FCP = 450 #, (DRLG CBP #6) 8348', DRILL OUT HALLIBURTON 8K CBP IN 10 MIN, 200 # DIFF, RIH TAG @ 8500 ', C/O 30 ' SAND, FCP = 450 #, (DRLG CBP #7) 8530', DRILL OUT HALLIBURTON 8K CBP IN 10 MIN, 300 # DIFF, RIH TAG @ 8830', C/O 18' SAND TO PBTD @ 8848 ', FCP = 450 #, CIRC WELL CLEAN,R/D SWIVEL, POOH LAY DN 17 JTS ON TRAILER,LAND TBG W/ TBG HANGER, W/ 262 JTS 2 3/8" L-80 TBG, @ 8304.57 ', EOT @ 8321.60 ', N/D BOPS, DROP BALL DN TBG, N/U WH, PRESSURE TEST FLOW LINES TO 3000#, , PUMP BIT OFF AT 1400 #, TURN WELL OVER TO FLOW BACK CREW, FTP = 1850 #, SICP = 2450#, WITH 5600 BBLS WTR LEFT TO RECOVER, KB = 14.00' HANGER = .83' 262 JTS 2 3/8" L-80 TBG = 8304.57' XN-NIPPLE 1.875" = 2.20' EOT = 8321.60' 283 JTS 2 3/8" L-80 TBG DELIVERD 262 JTS 2 3/8" L-80 TBG USED 21 JTS 2 3/8" L-80 TBG RETURNED
	18:45 - 19:15	0.50	COMP	50				WELL TURNED TO SALES @ 1845 HR ON 5/29/2012. 1130 MCFD, 1440 BWPD, FCP 2500#, FTP 2200#, 20/64" CK.
6/2/2012	7:00 -			50				WELL IP'D ON 6/2/12 - 2849 MCFD, 0 BOPD, 408 BWPD, CP 2521#, FTP .09#, CK 20/64, LP 124#, 24 HRS

Scientific Drilling
Rocky Mountain Operations

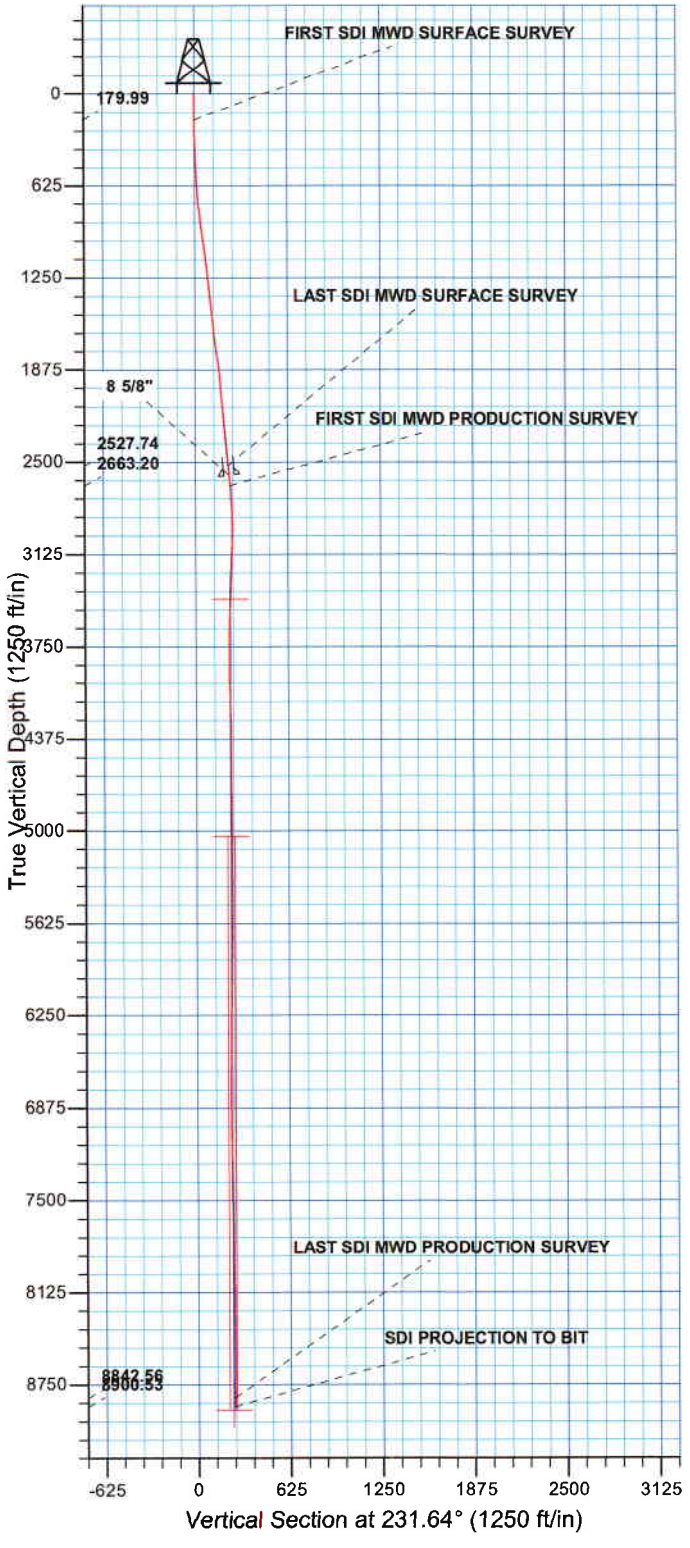
Project: Uintah County, UT UTM12
Site: NBU 922-36D PAD
Well: NBU 922-36D4CS
Wellbore: OH
Design: OH

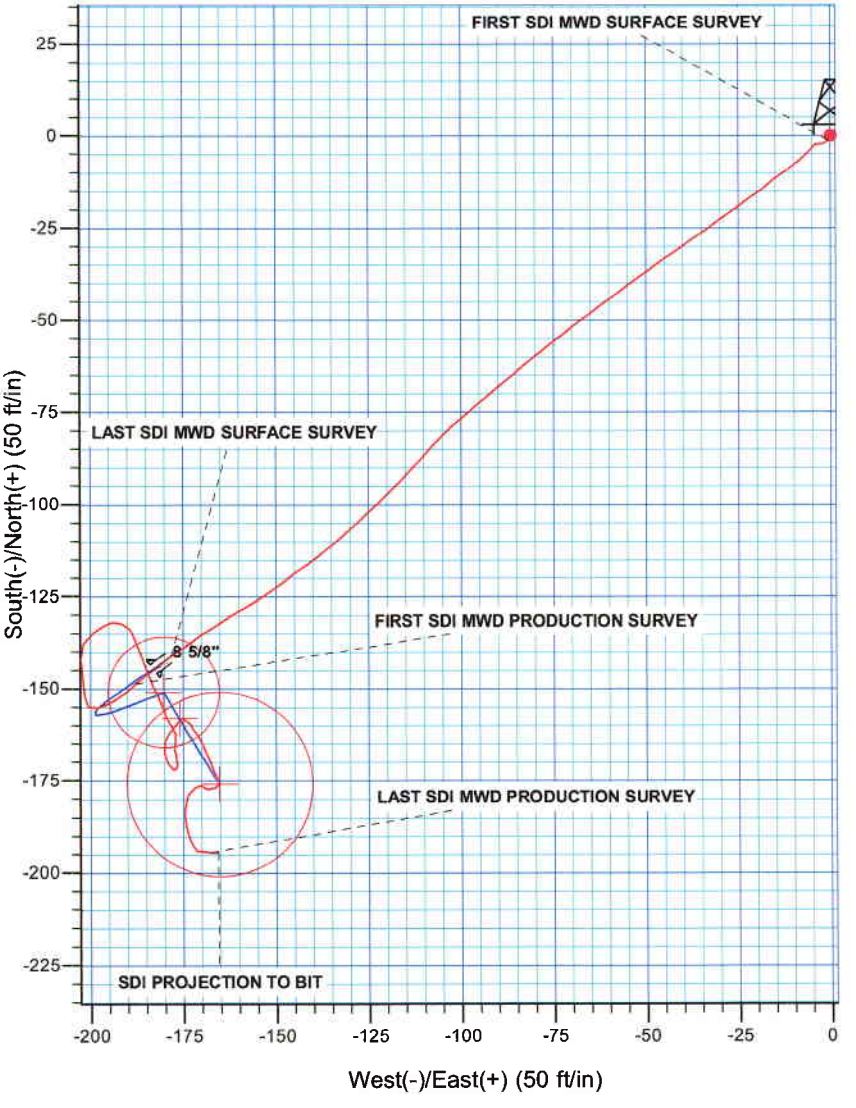
Anadarko Petroleum Corporation

WELL DETAILS: NBU 922-36D4CS					
GL 5087' & 14' @ 5101.00ft (ENSIGN 138)					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14528969.01	2090356.88	39.996896	-109.393515

Azimuths to True North
Magnetic North: 11.07°

Magnetic Field
Strength: 52375.5snT
Dip Angle: 65.89°
Date: 02/09/2011
Model: IGRF2010





PROJECT DETAILS: Uintah County, UT UTM12	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1927 - Western US
Ellipsoid:	Clarke 1866
Zone:	Zone 12N (114 W to 108 W)
Location:	SECTION 36 T9S R22E
System Datum:	Mean Sea Level

Design: OH (NBU 922-36D4CS/OH)

Created By: Gabe Kendall Date: 12:23, April 19 2012

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 922-36D PAD
NBU 922-36D4CS

OH

Design: OH

Standard Survey Report

19 April, 2012

Anadarko
Petroleum Corporation

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Site:	NBU 922-36D PAD	**MD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Well:	NBU 922-36D4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Project Uintah County, UT UTM12

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 922-36D PAD, SECTION 36 T9S R22E

Site Position:		**Northing:**	14,528,971.38 usft	**Latitude:**	39.996903
From:	Lat/Long	**Easting:**	2,090,347.02 usft	**Longitude:**	-109.393550
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.03 °

Well NBU 922-36D4CS, 1064 FNL 990 FWL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,528,969.01 usft	**Latitude:**	39.996896
	+E/-W	0.00 ft	**Easting:**	2,090,356.87 usft	**Longitude:**	-109.393515
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,087.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/09/11	11.07	65.89	52,376

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	231.64

Survey Program **Date** 04/19/12

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
10.00	2,540.00	Survey #1 WFT MWD SURFACE (OH)	MWD	MWD - Standard
2,676.00	8,916.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10.00	0.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1.02	206.92	179.99	-1.35	-0.69	1.37	0.60	0.60	0.00
FIRST SDI MWD SURFACE SURVEY									
260.00	1.12	260.02	259.98	-2.12	-1.78	2.71	1.20	0.13	66.38
350.00	1.05	275.48	349.96	-2.19	-3.46	4.08	0.33	-0.08	17.18
440.00	2.19	212.61	439.93	-3.56	-5.21	6.30	2.17	1.27	-69.86
530.00	3.50	231.36	529.82	-6.73	-8.29	10.67	1.77	1.46	20.83
620.00	3.88	234.36	619.63	-10.22	-12.91	16.46	0.47	0.42	3.33
710.00	5.38	232.73	709.34	-14.55	-18.74	23.72	1.67	1.67	-1.81

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Site:	NBU 922-36D PAD	**MD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Well:	NBU 922-36D4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
800.00	6.63	234.48	798.84	-20.12	-26.32	33.13	1.40	1.39	1.94
890.00	7.38	234.36	888.17	-26.51	-35.25	44.09	0.83	0.83	-0.13
980.00	7.81	234.86	977.38	-33.39	-44.95	55.97	0.48	0.48	0.56
1,070.00	7.88	232.98	1,066.54	-40.63	-54.88	68.24	0.30	0.08	-2.09
1,160.00	7.13	233.86	1,155.77	-47.64	-64.31	79.99	0.84	-0.83	0.98
1,250.00	6.00	231.86	1,245.17	-53.84	-72.52	90.28	1.28	-1.26	-2.22
1,340.00	6.19	231.36	1,334.67	-59.77	-80.01	99.83	0.22	0.21	-0.56
1,430.00	5.75	227.73	1,424.18	-65.83	-87.14	109.18	0.64	-0.49	-4.03
1,520.00	6.56	231.23	1,513.66	-72.09	-94.48	118.82	0.99	0.90	3.89
1,610.00	6.75	228.11	1,603.05	-78.84	-102.43	129.24	0.45	0.21	-3.47
1,700.00	7.19	219.48	1,692.39	-86.72	-109.95	140.03	1.26	0.49	-9.59
1,790.00	7.13	225.11	1,781.69	-95.01	-117.49	151.08	0.78	-0.07	6.26
1,880.00	6.25	228.73	1,871.08	-102.18	-125.13	161.53	1.08	-0.98	4.02
1,970.00	5.44	226.35	1,960.61	-108.36	-131.89	170.67	0.94	-0.90	-2.64
2,060.00	5.25	233.98	2,050.22	-113.72	-138.31	179.03	0.82	-0.21	8.48
2,150.00	5.56	231.73	2,139.82	-118.84	-145.06	187.50	0.42	0.34	-2.50
2,240.00	6.31	235.48	2,229.33	-124.35	-152.56	196.80	0.94	0.83	4.17
2,330.00	6.44	240.48	2,318.78	-129.64	-161.03	206.72	0.63	0.14	5.56
2,420.00	5.75	234.86	2,408.27	-134.72	-169.11	216.21	1.01	-0.77	-6.24
2,540.00	5.06	235.36	2,527.74	-141.19	-178.38	227.49	0.58	-0.58	0.42
LAST SDI MWD SURFACE SURVEY									
2,676.00	5.13	226.99	2,663.20	-148.74	-187.76	239.54	0.55	0.05	-6.15
FIRST SDI MWD PRODUCTION SURVEY									
2,770.00	3.66	240.88	2,756.92	-153.07	-193.45	246.69	1.92	-1.56	14.78
2,865.00	2.41	253.44	2,851.79	-155.12	-198.02	251.54	1.48	-1.32	13.22
2,959.00	1.31	320.16	2,945.75	-154.85	-200.60	253.40	2.39	-1.17	70.98
3,054.00	2.62	348.65	3,040.69	-151.89	-201.72	252.44	1.68	1.38	29.99
3,149.00	3.35	357.62	3,135.56	-146.99	-202.27	249.82	0.91	0.77	9.44
3,243.00	2.73	350.22	3,229.43	-142.04	-202.76	247.14	0.78	-0.66	-7.87
3,338.00	2.67	30.00	3,324.33	-137.89	-202.04	244.00	1.93	-0.06	41.87
3,432.00	2.64	52.06	3,418.23	-134.66	-199.24	239.80	1.08	-0.03	23.47
3,527.00	1.58	64.98	3,513.17	-132.77	-196.32	236.34	1.22	-1.12	13.60
3,621.00	1.22	73.17	3,607.14	-131.93	-194.19	234.15	0.44	-0.38	8.71
3,716.00	1.32	111.91	3,702.12	-132.04	-192.21	232.66	0.89	0.11	40.78
3,811.00	1.02	123.34	3,797.10	-132.92	-190.49	231.85	0.40	-0.32	12.03
3,905.00	0.87	146.65	3,891.09	-133.97	-189.40	231.65	0.44	-0.16	24.80
4,000.00	2.54	156.88	3,986.04	-136.51	-188.17	232.27	1.78	1.76	10.77
4,094.00	2.96	159.00	4,079.93	-140.69	-186.49	233.54	0.46	0.45	2.26
4,189.00	2.97	160.21	4,174.81	-145.30	-184.77	235.06	0.07	0.01	1.27
4,283.00	2.90	154.78	4,268.68	-149.74	-182.94	236.37	0.30	-0.07	-5.78
4,378.00	2.73	155.95	4,363.57	-153.98	-180.99	237.48	0.19	-0.18	1.23
4,472.00	2.47	161.49	4,457.47	-157.95	-179.43	238.72	0.38	-0.28	5.89
4,567.00	1.69	136.41	4,552.41	-160.90	-177.82	239.29	1.24	-0.82	-26.40

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Site:	NBU 922-36D PAD	**MD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Well:	NBU 922-36D4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,662.00	0.41	207.43	4,647.39	-162.22	-177.01	239.47	1.69	-1.35	74.76
4,756.00	0.37	171.38	4,741.39	-162.82	-177.12	239.93	0.26	-0.04	-38.35
4,851.00	0.60	179.74	4,836.39	-163.62	-177.07	240.39	0.25	0.24	8.80
4,945.00	0.62	188.90	4,930.38	-164.61	-177.15	241.06	0.11	0.02	9.74
5,040.00	0.70	185.39	5,025.38	-165.70	-177.28	241.84	0.09	0.08	-3.69
5,134.00	0.53	171.50	5,119.37	-166.70	-177.27	242.46	0.24	-0.18	-14.78
5,229.00	0.97	169.13	5,214.36	-167.92	-177.05	243.05	0.46	0.46	-2.49
5,323.00	0.88	170.45	5,308.35	-169.42	-176.78	243.76	0.10	-0.10	1.40
5,418.00	1.14	183.10	5,403.34	-171.08	-176.71	244.74	0.36	0.27	13.32
5,513.00	1.11	278.02	5,498.32	-171.90	-177.68	246.00	1.75	-0.03	99.92
5,607.00	1.87	340.52	5,592.30	-170.32	-179.09	246.13	1.78	0.81	66.49
5,702.00	1.91	341.45	5,687.25	-167.36	-180.11	245.09	0.05	0.04	0.98
5,796.00	1.85	21.47	5,781.20	-164.46	-180.05	243.25	1.37	-0.06	42.57
5,891.00	1.31	34.05	5,876.16	-162.14	-178.88	240.89	0.67	-0.57	13.24
5,985.00	0.94	40.40	5,970.15	-160.66	-177.78	239.11	0.41	-0.39	6.76
6,080.00	0.79	39.72	6,065.13	-159.56	-176.86	237.70	0.16	-0.16	-0.72
6,175.00	0.54	44.19	6,160.13	-158.74	-176.13	236.62	0.27	-0.26	4.71
6,269.00	0.31	86.13	6,254.13	-158.40	-175.57	235.97	0.40	-0.24	44.62
6,364.00	0.38	101.20	6,349.12	-158.45	-175.00	235.55	0.12	0.07	15.86
6,458.00	0.76	126.50	6,443.12	-158.88	-174.19	235.19	0.48	0.40	26.91
6,553.00	0.70	130.72	6,538.11	-159.63	-173.25	234.91	0.08	-0.06	4.44
6,647.00	1.20	146.17	6,632.10	-160.82	-172.26	234.88	0.59	0.53	16.44
6,742.00	1.28	152.27	6,727.08	-162.59	-171.22	235.16	0.16	0.08	6.42
6,836.00	1.41	153.75	6,821.05	-164.55	-170.22	235.59	0.14	0.14	1.57
6,931.00	1.59	152.30	6,916.02	-166.77	-169.09	236.08	0.19	0.19	-1.53
7,026.00	1.92	159.34	7,010.97	-169.43	-167.91	236.81	0.41	0.35	7.41
7,120.00	2.19	154.65	7,104.91	-172.52	-166.59	237.69	0.34	0.29	-4.99
7,215.00	1.23	160.52	7,199.87	-175.12	-165.47	238.43	1.03	-1.01	6.18
7,309.00	1.93	238.30	7,293.84	-176.91	-166.48	240.33	2.19	0.74	82.74
7,404.00	1.14	305.27	7,388.81	-177.20	-168.61	242.19	1.91	-0.83	70.49
7,499.00	0.88	285.23	7,483.80	-176.46	-170.09	242.89	0.46	-0.27	-21.09
7,593.00	0.62	238.91	7,577.79	-176.54	-171.22	243.82	0.68	-0.28	-49.28
7,688.00	0.97	232.85	7,672.78	-177.29	-172.30	245.13	0.38	0.37	-6.38
7,782.00	0.88	221.25	7,766.77	-178.31	-173.41	246.64	0.22	-0.10	-12.34
7,877.00	0.88	188.29	7,861.76	-179.58	-174.00	247.89	0.53	0.00	-34.69
7,971.00	1.32	190.47	7,955.74	-181.36	-174.30	249.23	0.47	0.47	2.32
8,066.00	1.25	185.10	8,050.72	-183.47	-174.59	250.76	0.15	-0.07	-5.65
8,161.00	0.69	170.19	8,145.70	-185.07	-174.59	251.75	0.64	-0.59	-15.69
8,255.00	0.97	166.93	8,239.69	-186.40	-174.31	252.36	0.30	0.30	-3.47
8,350.00	0.70	178.01	8,334.68	-187.76	-174.11	253.05	0.33	-0.28	11.66
8,444.00	1.12	164.67	8,428.67	-189.22	-173.84	253.75	0.50	0.45	-14.19
8,539.00	1.32	153.31	8,523.65	-191.09	-173.11	254.33	0.33	0.21	-11.96
8,633.00	1.14	162.01	8,617.63	-192.95	-172.33	254.88	0.28	-0.19	9.26
8,728.00	0.99	107.40	8,712.61	-194.10	-171.26	254.74	1.04	-0.16	-57.48

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Site:	NBU 922-36D PAD	**MD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Well:	NBU 922-36D4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,822.00	1.97	88.52	8,806.58	-194.30	-168.87	252.99	1.15	1.04	-20.09
8,858.00	1.99	93.64	8,842.56	-194.32	-167.62	252.04	0.49	0.06	14.22
LAST SDI MWD PRODUCTION SURVEY									
8,916.00	1.99	93.64	8,900.53	-194.45	-165.61	250.54	0.00	0.00	0.00
SDI PROJECTION TO BIT									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,606.00	2,593.48	8 5/8"	8.625	11.000

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
180.00	179.99	-1.35	-0.69	FIRST SDI MWD SURFACE SURVEY
2,540.00	2,527.74	-141.19	-178.38	LAST SDI MWD SURFACE SURVEY
2,676.00	2,663.20	-148.74	-187.76	FIRST SDI MWD PRODUCTION SURVEY
8,858.00	8,842.56	-194.32	-167.62	LAST SDI MWD PRODUCTION SURVEY
8,916.00	8,900.53	-194.45	-165.61	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____

Scientific Drilling
Rocky Mountain Operations

Kerr McGee Oil and Gas Onshore LP

Uintah County, UT UTM12
NBU 922-36D PAD
NBU 922-36D4CS

OH

Design: OH

Survey Report - Geographic

19 April, 2012

Anadarko
Petroleum Corporation

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Site:	NBU 922-36D PAD	**MD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Well:	NBU 922-36D4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Project Uintah County, UT UTM12

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site NBU 922-36D PAD, SECTION 36 T9S R22E

Site Position:		**Northing:**	14,528,971.38 usft	**Latitude:**	39.996903
From:	Lat/Long	**Easting:**	2,090,347.02 usft	**Longitude:**	-109.393550
Position Uncertainty:	0.00 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	1.03 °

Well NBU 922-36D4CS, 1064 FNL 990 FWL

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,528,969.01 usft	**Latitude:**	39.996896
	+E/-W	0.00 ft	**Easting:**	2,090,356.87 usft	**Longitude:**	-109.393515
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,087.00 ft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/09/11	11.07	65.89	52,376

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	231.64

Survey Program **Date** 04/19/12

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
10.00	2,540.00	Survey #1 WFT MWD SURFACE (OH)	MWD	MWD - Standard
2,676.00	8,916.00	Survey #2 SDI MWD PRODUCTION (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,528,969.01	2,090,356.87	39.996896	-109.393515
10.00	0.00	0.00	10.00	0.00	0.00	14,528,969.01	2,090,356.87	39.996896	-109.393515
180.00	1.02	206.92	179.99	-1.35	-0.69	14,528,967.65	2,090,356.21	39.996892	-109.393518
FIRST SDI MWD SURFACE SURVEY									
260.00	1.12	260.02	259.98	-2.12	-1.78	14,528,966.86	2,090,355.13	39.996890	-109.393522
350.00	1.05	275.48	349.96	-2.19	-3.46	14,528,966.76	2,090,353.45	39.996890	-109.393528
440.00	2.19	212.61	439.93	-3.56	-5.21	14,528,965.36	2,090,351.73	39.996886	-109.393534
530.00	3.50	231.36	529.82	-6.73	-8.29	14,528,962.14	2,090,348.71	39.996878	-109.393545
620.00	3.88	234.36	619.63	-10.22	-12.91	14,528,958.56	2,090,344.15	39.996868	-109.393561
710.00	5.38	232.73	709.34	-14.55	-18.74	14,528,954.13	2,090,338.40	39.996856	-109.393582
800.00	6.63	234.48	798.84	-20.12	-26.32	14,528,948.42	2,090,330.92	39.996841	-109.393609

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Site:	NBU 922-36D PAD	**MD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Well:	NBU 922-36D4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
890.00	7.38	234.36	888.17	-26.51	-35.25	14,528,941.87	2,090,322.11	39.996823	-109.393641
980.00	7.81	234.86	977.38	-33.39	-44.95	14,528,934.81	2,090,312.53	39.996804	-109.393676
1,070.00	7.88	232.98	1,066.54	-40.63	-54.88	14,528,927.40	2,090,302.74	39.996785	-109.393711
1,160.00	7.13	233.86	1,155.77	-47.64	-64.31	14,528,920.22	2,090,293.43	39.996765	-109.393745
1,250.00	6.00	231.86	1,245.17	-53.84	-72.52	14,528,913.88	2,090,285.33	39.996748	-109.393774
1,340.00	6.19	231.36	1,334.67	-59.77	-80.01	14,528,907.81	2,090,277.95	39.996732	-109.393801
1,430.00	5.75	227.73	1,424.18	-65.83	-87.14	14,528,901.62	2,090,270.94	39.996715	-109.393826
1,520.00	6.56	231.23	1,513.66	-72.09	-94.48	14,528,895.23	2,090,263.70	39.996698	-109.393853
1,610.00	6.75	228.11	1,603.05	-78.84	-102.43	14,528,888.34	2,090,255.88	39.996680	-109.393881
1,700.00	7.19	219.48	1,692.39	-86.72	-109.95	14,528,880.33	2,090,248.51	39.996658	-109.393908
1,790.00	7.13	225.11	1,781.69	-95.01	-117.49	14,528,871.90	2,090,241.12	39.996635	-109.393935
1,880.00	6.25	228.73	1,871.08	-102.18	-125.13	14,528,864.59	2,090,233.61	39.996616	-109.393962
1,970.00	5.44	226.35	1,960.61	-108.36	-131.89	14,528,858.30	2,090,226.95	39.996599	-109.393986
2,060.00	5.25	233.98	2,050.22	-113.72	-138.31	14,528,852.82	2,090,220.63	39.996584	-109.394009
2,150.00	5.56	231.73	2,139.82	-118.84	-145.06	14,528,847.57	2,090,213.97	39.996570	-109.394033
2,240.00	6.31	235.48	2,229.33	-124.35	-152.56	14,528,841.94	2,090,206.58	39.996555	-109.394060
2,330.00	6.44	240.48	2,318.78	-129.64	-161.03	14,528,836.49	2,090,198.21	39.996540	-109.394090
2,420.00	5.75	234.86	2,408.27	-134.72	-169.11	14,528,831.27	2,090,190.22	39.996526	-109.394119
2,540.00	5.06	235.36	2,527.74	-141.19	-178.38	14,528,824.63	2,090,181.07	39.996508	-109.394152
LAST SDI MWD SURFACE SURVEY									
2,676.00	5.13	226.99	2,663.20	-148.74	-187.76	14,528,816.91	2,090,171.83	39.996488	-109.394186
FIRST SDI MWD PRODUCTION SURVEY									
2,770.00	3.66	240.88	2,756.92	-153.07	-193.45	14,528,812.48	2,090,166.21	39.996476	-109.394206
2,865.00	2.41	253.44	2,851.79	-155.12	-198.02	14,528,810.35	2,090,161.68	39.996470	-109.394222
2,959.00	1.31	320.16	2,945.75	-154.85	-200.60	14,528,810.57	2,090,159.10	39.996471	-109.394231
3,054.00	2.62	348.65	3,040.69	-151.89	-201.72	14,528,813.51	2,090,157.92	39.996479	-109.394235
3,149.00	3.35	357.62	3,135.56	-146.99	-202.27	14,528,818.40	2,090,157.29	39.996493	-109.394237
3,243.00	2.73	350.22	3,229.43	-142.04	-202.76	14,528,823.34	2,090,156.71	39.996506	-109.394239
3,338.00	2.67	30.00	3,324.33	-137.89	-202.04	14,528,827.50	2,090,157.35	39.996518	-109.394236
3,432.00	2.64	52.06	3,418.23	-134.66	-199.24	14,528,830.78	2,090,160.10	39.996526	-109.394226
3,527.00	1.58	64.98	3,513.17	-132.77	-196.32	14,528,832.73	2,090,162.97	39.996532	-109.394216
3,621.00	1.22	73.17	3,607.14	-131.93	-194.19	14,528,833.61	2,090,165.09	39.996534	-109.394208
3,716.00	1.32	111.91	3,702.12	-132.04	-192.21	14,528,833.53	2,090,167.08	39.996534	-109.394201
3,811.00	1.02	123.34	3,797.10	-132.92	-190.49	14,528,832.68	2,090,168.81	39.996531	-109.394195
3,905.00	0.87	146.65	3,891.09	-133.97	-189.40	14,528,831.65	2,090,169.92	39.996528	-109.394191
4,000.00	2.54	156.88	3,986.04	-136.51	-188.17	14,528,829.13	2,090,171.19	39.996521	-109.394187
4,094.00	2.96	159.00	4,079.93	-140.69	-186.49	14,528,824.98	2,090,172.95	39.996510	-109.394181
4,189.00	2.97	160.21	4,174.81	-145.30	-184.77	14,528,820.41	2,090,174.75	39.996497	-109.394175
4,283.00	2.90	154.78	4,268.68	-149.74	-182.94	14,528,816.00	2,090,176.67	39.996485	-109.394168
4,378.00	2.73	155.95	4,363.57	-153.98	-180.99	14,528,811.79	2,090,178.69	39.996473	-109.394161
4,472.00	2.47	161.49	4,457.47	-157.95	-179.43	14,528,807.86	2,090,180.32	39.996462	-109.394156
4,567.00	1.69	136.41	4,552.41	-160.90	-177.82	14,528,804.93	2,090,181.98	39.996454	-109.394150
4,662.00	0.41	207.43	4,647.39	-162.22	-177.01	14,528,803.63	2,090,182.82	39.996451	-109.394147
4,756.00	0.37	171.38	4,741.39	-162.82	-177.12	14,528,803.03	2,090,182.72	39.996449	-109.394148
4,851.00	0.60	179.74	4,836.39	-163.62	-177.07	14,528,802.23	2,090,182.78	39.996447	-109.394147
4,945.00	0.62	188.90	4,930.38	-164.61	-177.15	14,528,801.23	2,090,182.72	39.996444	-109.394148
5,040.00	0.70	185.39	5,025.38	-165.70	-177.28	14,528,800.15	2,090,182.61	39.996441	-109.394148
5,134.00	0.53	171.50	5,119.37	-166.70	-177.27	14,528,799.15	2,090,182.64	39.996438	-109.394148
5,229.00	0.97	169.13	5,214.36	-167.92	-177.05	14,528,797.92	2,090,182.88	39.996435	-109.394147
5,323.00	0.88	170.45	5,308.35	-169.42	-176.78	14,528,796.44	2,090,183.17	39.996431	-109.394146
5,418.00	1.14	183.10	5,403.34	-171.08	-176.71	14,528,794.78	2,090,183.27	39.996426	-109.394146
5,513.00	1.11	278.02	5,498.32	-171.90	-177.68	14,528,793.94	2,090,182.32	39.996424	-109.394150
5,607.00	1.87	340.52	5,592.30	-170.32	-179.09	14,528,795.49	2,090,180.88	39.996428	-109.394155
5,702.00	1.91	341.45	5,687.25	-167.36	-180.11	14,528,798.43	2,090,179.81	39.996437	-109.394158
5,796.00	1.85	21.47	5,781.20	-164.46	-180.05	14,528,801.33	2,090,179.81	39.996445	-109.394158

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Site:	NBU 922-36D PAD	**MD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Well:	NBU 922-36D4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,891.00	1.31	34.05	5,876.16	-162.14	-178.88	14,528,803.68	2,090,180.94	39.996451	-109.394154
5,985.00	0.94	40.40	5,970.15	-160.66	-177.78	14,528,805.18	2,090,182.02	39.996455	-109.394150
6,080.00	0.79	39.72	6,065.13	-159.56	-176.86	14,528,806.29	2,090,182.92	39.996458	-109.394147
6,175.00	0.54	44.19	6,160.13	-158.74	-176.13	14,528,807.13	2,090,183.64	39.996460	-109.394144
6,269.00	0.31	86.13	6,254.13	-158.40	-175.57	14,528,807.47	2,090,184.19	39.996461	-109.394142
6,364.00	0.38	101.20	6,349.12	-158.45	-175.00	14,528,807.44	2,090,184.76	39.996461	-109.394140
6,458.00	0.76	126.50	6,443.12	-158.88	-174.19	14,528,807.02	2,090,185.57	39.996460	-109.394137
6,553.00	0.70	130.72	6,538.11	-159.63	-173.25	14,528,806.29	2,090,186.53	39.996458	-109.394134
6,647.00	1.20	146.17	6,632.10	-160.82	-172.26	14,528,805.11	2,090,187.54	39.996455	-109.394130
6,742.00	1.28	152.27	6,727.08	-162.59	-171.22	14,528,803.36	2,090,188.62	39.996450	-109.394126
6,836.00	1.41	153.75	6,821.05	-164.55	-170.22	14,528,801.42	2,090,189.65	39.996444	-109.394123
6,931.00	1.59	152.30	6,916.02	-166.77	-169.09	14,528,799.22	2,090,190.82	39.996438	-109.394119
7,026.00	1.92	159.34	7,010.97	-169.43	-167.91	14,528,796.59	2,090,192.04	39.996431	-109.394115
7,120.00	2.19	154.65	7,104.91	-172.52	-166.59	14,528,793.52	2,090,193.42	39.996422	-109.394110
7,215.00	1.23	160.52	7,199.87	-175.12	-165.47	14,528,790.93	2,090,194.59	39.996415	-109.394106
7,309.00	1.93	238.30	7,293.84	-176.91	-166.48	14,528,789.13	2,090,193.61	39.996410	-109.394110
7,404.00	1.14	305.27	7,388.81	-177.20	-168.61	14,528,788.80	2,090,191.48	39.996410	-109.394117
7,499.00	0.88	285.23	7,483.80	-176.46	-170.09	14,528,789.51	2,090,189.99	39.996412	-109.394122
7,593.00	0.62	238.91	7,577.79	-176.54	-171.22	14,528,789.42	2,090,188.86	39.996411	-109.394126
7,688.00	0.97	232.85	7,672.78	-177.29	-172.30	14,528,788.65	2,090,187.79	39.996409	-109.394130
7,782.00	0.88	221.25	7,766.77	-178.31	-173.41	14,528,787.60	2,090,186.70	39.996407	-109.394134
7,877.00	0.88	188.29	7,861.76	-179.58	-174.00	14,528,786.32	2,090,186.14	39.996403	-109.394136
7,971.00	1.32	190.47	7,955.74	-181.36	-174.30	14,528,784.54	2,090,185.87	39.996398	-109.394137
8,066.00	1.25	185.10	8,050.72	-183.47	-174.59	14,528,782.43	2,090,185.62	39.996392	-109.394139
8,161.00	0.69	170.19	8,145.70	-185.07	-174.59	14,528,780.83	2,090,185.65	39.996388	-109.394138
8,255.00	0.97	166.93	8,239.69	-186.40	-174.31	14,528,779.50	2,090,185.95	39.996384	-109.394137
8,350.00	0.70	178.01	8,334.68	-187.76	-174.11	14,528,778.14	2,090,186.18	39.996381	-109.394137
8,444.00	1.12	164.67	8,428.67	-189.22	-173.84	14,528,776.69	2,090,186.47	39.996377	-109.394136
8,539.00	1.32	153.31	8,523.65	-191.09	-173.11	14,528,774.83	2,090,187.24	39.996371	-109.394133
8,633.00	1.14	162.01	8,617.63	-192.95	-172.33	14,528,772.99	2,090,188.05	39.996366	-109.394130
8,728.00	0.99	107.40	8,712.61	-194.10	-171.26	14,528,771.86	2,090,189.14	39.996363	-109.394127
8,822.00	1.97	88.52	8,806.58	-194.30	-168.87	14,528,771.70	2,090,191.54	39.996363	-109.394118
8,858.00	1.99	93.64	8,842.56	-194.32	-167.62	14,528,771.70	2,090,192.78	39.996363	-109.394114
LAST SDI MWD PRODUCTION SURVEY									
8,916.00	1.99	93.64	8,900.53	-194.45	-165.61	14,528,771.61	2,090,194.79	39.996362	-109.394106
SDI PROJECTION TO BIT									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,606.00	2,593.48	8 5/8"	8.625	11.000

Company:	Kerr McGee Oil and Gas Onshore LP	**Local Co-ordinate Reference:**	Well NBU 922-36D4CS
Project:	Uintah County, UT UTM12	**TVD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Site:	NBU 922-36D PAD	**MD Reference:**	GL 5087' & 14' @ 5101.00ft (ENSIGN 138)
Well:	NBU 922-36D4CS	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
180.00	179.99	-1.35	-0.69	FIRST SDI MWD SURFACE SURVEY
2,540.00	2,527.74	-141.19	-178.38	LAST SDI MWD SURFACE SURVEY
2,676.00	2,663.20	-148.74	-187.76	FIRST SDI MWD PRODUCTION SURVEY
8,858.00	8,842.56	-194.32	-167.62	LAST SDI MWD PRODUCTION SURVEY
8,916.00	8,900.53	-194.45	-165.61	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____